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Preface

A crucial part of making the world safer is understanding the range of risks that people face and how they perceive them. The Lloyd’s Register Foundation World Risk Poll provides the first global picture of how the world’s citizens see risk and safety and the differences between perception of risk and actual experience.

Much of the data, collected by Gallup as part of its World Poll, is from people who have never been surveyed before and from places where official figures are unavailable or unreliable. This brings a new depth to our understanding of risk. The research includes 150,000 people in 142 countries. They were interviewed face to face in the majority of cases, including in some of the most remote and challenging parts of the world. Their responses give us a window into lives in which danger and the threat of injury, and sometimes death, are an everyday part of life.

Understanding the threats people face is integral to improvement. Our purpose is not just to illustrate the issues but to translate knowledge into action that empowers communities to shape their responses. We are working with governments, regulators, NGOs and researchers to form evidence-based interventions to make people safer. As each round of the poll takes place, we will have richer data and knowledge to inform those actions.

Professor Richard Clegg
Chief Executive
Lloyd’s Register Foundation
Foreword

Nearly half a century ago, my colleagues and I began to study risk attitudes and perceptions of some 30 hazardous activities and technologies among small samples of the American public and the emerging community of risk analysts and scholars. Because our data were quantitative in nature, our approach became known as the psychometric paradigm for studying perceived risk. The topic and risk-management policies. Fast forward to 2019, when Lloyd’s Register Foundation, guided by the insights gained from decades of previous studies, launched by far the most ambitious risk poll ever attempted. Some 150,000 persons coming from representative samples in 142 countries, manage the risks they faced, and more.

perspectives of the world’s people in a way never before seen. The knowledge contained in these summary statistics is rich indeed and will be greatly enhanced by plans to make the data widely available.

Dr. Paul Slovic
Professor of Psychology
President of Decision Research
University of Oregon

Member
Lloyd’s Register Foundation Advisory Council
World Risk Poll:
Executive Summary

If the world is to become a safer place, we need to understand the risks people face and how those risks are perceived.

Until now, many people's views on safety and risk have not been heard.

- The World Risk Poll surveyed 150,000 people in 142 countries, including people in remote regions frequently excluded from comparative polls. The breadth of the research provides a more accurate picture of global attitudes toward risk and safety than has ever been achieved before.
- As records are not kept or are not reliable or informative, the World Risk Poll is a unique opportunity to fill many data gaps and gather data from countries across the world to understand more about the risks people worry about, fear they will experience or have experienced.
- Because the poll will be conducted at least four times, the weight of accumulated knowledge will contribute at least four times, the weight of accumulated knowledge will understanding of risk.
Insight into action

The Lloyd’s Register Foundation World Risk Poll aims to reduce risk around the world and improve safety.

The World Risk Poll results have been shared globally, so regulators, businesses, governments and researchers can work with communities to develop relevant and relatable policies that empower people to take action that saves lives and helps them feel safer.

1 People’s perceptions of risks differed from the likelihood of experiencing them

Many people did not think they faced any safety risks when asked about top threats to their safety in their daily lives. At the global level, 19% of people said they face ‘no risk,’ and an additional 21% cited only one.

- People in high-income countries and territories were more likely to identify road-related risks as one of the top two threats to their safety than people in lower-income countries. However, official statistics show high-income countries generally experience lower traffic-related fatality rates. People in low-income countries worried about traffic-related risks, but they often raised other risks — such as violence and crime and health — as being more significant.

- People tended to rate the likelihood of being in an aeroplane accident on the same level as drowning, even though an estimated 320,000 people die each year by drowning, compared to aeroplane accidents killing hundreds of people annually.

2 Demographic factors were generally a better predictor of risk perception than experience

Safety interventions that do not address socioeconomic, cultural and demographic factors are generally less likely to reduce risk.

- Young internet users were more likely to worry about online bullying than older users.

- Public perceptions of risk relating to nuclear power were also influenced by demographic factors, with notable differences tied to country income level.

- In low-income countries and territories, views about genetically modified foods were generally more positive.

- While men and women were about as likely to believe climate change represents a ‘very serious’ threat to people in their countries in the next 20 years, men were more likely than women to say that climate change is ‘not a threat at all.’

In some situations, experience was a strong predictor of risk perceptions — for example, experience of harm from drinking water was associated with perceived risk of harm from drinking unsafe water.
Across the world, different groups of people experienced risk in very different ways

Economic and social development change the nature of the risks we face.

- The most dangerous jobs in the world are in agriculture, fishing and construction. In lower-income economies, high proportions of the population may be involved in these occupations, increasing the likelihood of serious harm.
- Generally, experience of actual harm raised levels of worry. For example, people who had experienced serious harm from mental health issues were more likely to be 'very worried' about this risk than those who had not.
- In higher-income economies, violence and harassment were generally a more common worry than those who had not.

Few people across the world trusted government and official organisations to keep them safe.

- Only 15% of people across the world trusted their government's food safety authorities as their number one source of food safety information.
- The most trusted sources of food safety information were family and friends and medical professionals. About half of people in low-income economies sought food safety information from celebrities or religious leaders.
- People in developed economies were more likely to trust their governments for food safety information than people in lower-income economies.

The global COVID-19 pandemic and more localised disasters, such as the Beirut port explosion, have raised pressing questions about the effectiveness of risk communication strategies and the role of different communities and groups in gaining trust.
Highlights

Women and risk

- At the time of the survey, 27% of women across the globe felt less safe than they did five years previously.
- Significant numbers of working women around the world feared violence and harassment in the workplace — over two-thirds of women in Malawi, Swaziland and Nepal expressed worry about this risk.
- Harassment and violence at work were also a significant concern for women in developed countries; 42% of women in Finland worried about this issue, as well as 38% in France, 32% in Sweden and 32% in Australia.
- Worries about harassment and violence at work were also borne out by experience for many women; Zambia ranked first in the world, with 47% of working women reporting this issue.
- Workers in Australia — ranked sixth in the world for experience of violence and harassment in the workplace — reported a significant gender gap, with 39% of women experiencing this issue compared to 24% of men.

Safety at work

- Nineteen percent of workers worldwide said they have been seriously injured at some point while working.
- Nineteen percent of workers worldwide said they have been seriously injured at some point while working.
- Experience of a serious injury while working was associated with experience of mental health issues; workers who had experienced physical violence and harassment at work were the most likely to say they had experienced mental health issues.

More than 50% of workers across seven countries in Central/Western and Eastern Africa and Southern Asia working were also work environments which typically have weak health and safety regulations.

- More than 50% of workers across seven countries in Central/Western and Eastern Africa and Southern Asia working were also work environments which typically have weak health and safety regulations.

- Physical violence and harassment at work were the most likely to be experienced in the following industries:
  - Agriculture: 54%
  - Construction: 48%
  - Manufacturing: 45%
  - Wholesale and Retail Trade: 42%
  - Mining: 40%
  - Construction: 38%
  - Manufacturing: 36%
  - Wholesale and Retail Trade: 34%
  - Mining: 32%
  - Construction: 30%
  - Manufacturing: 28%
  - Wholesale and Retail Trade: 26%
  - Mining: 24%
  - Construction: 22%
  - Manufacturing: 20%
  - Wholesale and Retail Trade: 18%
  - Mining: 16%
  - Construction: 14%
  - Manufacturing: 12%
  - Wholesale and Retail Trade: 10%
  - Mining: 8%
  - Construction: 6%
  - Manufacturing: 4%
  - Wholesale and Retail Trade: 2%
  - Mining: 1%
  - Construction: 0.5%
  - Manufacturing: 0.25%
  - Wholesale and Retail Trade: 0.125%
  - Mining: 0.0625%
  - Construction: 0.03125%
  - Manufacturing: 0.015625%
  - Wholesale and Retail Trade: 0.0078125%
  - Mining: 0.00390625%
  - Construction: 0.001953125%
  - Manufacturing: 0.0009765625%
  - Wholesale and Retail Trade: 0.00048828125%
  - Mining: 0.000244140625%
  - Construction: 0.0001220703125%
  - Manufacturing: 0.00006103515625%
  - Wholesale and Retail Trade: 0.00003051771875%
  - Mining: 0.0000152588828125%
  - Construction: 0.00000762944140625%
  - Manufacturing: 0.0000038147203125%
  - Wholesale and Retail Trade: 0.00000190736015625%
  - Mining: 0.000000953680078125%
  - Construction: 0.0000004768400390625%
  - Manufacturing: 0.00000023842001953125%
  - Wholesale and Retail Trade: 0.000000119210009765625%
  - Mining: 0.0000000596050048828125%
  - Construction: 0.00000002980250244140625%
  - Manufacturing: 0.0000000149012512203125%
  - Wholesale and Retail Trade: 0.00000000745062561015625%
  - Mining: 0.000000003725312805078125%
  - Construction: 0.0000000018626564025390625%
  - Manufacturing: 0.00000000093132820126953125%
  - Wholesale and Retail Trade: 0.000000000465664100634765625%
  - Mining: 0.000000000232832050317328125%
  - Construction: 0.000000000116416025158690625%
  - Manufacturing: 0.00000000005820801257934375%
  - Wholesale and Retail Trade: 0.0000000000291040062896875%
  - Mining: 0.00000000001455200314484375%
  - Construction: 0.00000000000727600157242188%
  - Manufacturing: 0.00000000000363800078621094%
  - Wholesale and Retail Trade: 0.00000000000181900039310547%
  - Mining: 0.00000000000090950019655274%
  - Construction: 0.00000000000045475009827637%
  - Manufacturing: 0.00000000000022737504913818%
  - Wholesale and Retail Trade: 0.00000000000011368752456909%
  - Mining: 0.00000000000005684376228454%
  - Construction: 0.00000000000002842188114227%
  - Manufacturing: 0.00000000000001421094057113%
  - Wholesale and Retail Trade: 0.00000000000000710547028556%
  - Mining: 0.00000000000000355273514278%
  - Construction: 0.00000000000000177636757139%
  - Manufacturing: 0.00000000000000088818378569%
  - Wholesale and Retail Trade: 0.00000000000000044409189285%
  - Mining: 0.00000000000000022204594642%
  - Construction: 0.00000000000000011102297321%
  - Manufacturing: 0.00000000000000005551148661%
  - Wholesale and Retail Trade: 0.00000000000000002775574330%
  - Mining: 0.00000000000000001387787165%
  - Construction: 0.00000000000000000693893583%
  - Manufacturing: 0.00000000000000000346946791%
  - Wholesale and Retail Trade: 0.00000000000000000173473395%
  - Mining: 0.00000000000000000086736698%
  - Construction: 0.00000000000000000043368349%
  - Manufacturing: 0.00000000000000000021684174%
  - Wholesale and Retail Trade: 0.00000000000000000010842087%
  - Mining: 0.00000000000000000005421043%
  - Construction: 0.00000000000000000002710521%
  - Manufacturing: 0.00000000000000000001355261%
  - Wholesale and Retail Trade: 0.00000000000000000000677630%
  - Mining: 0.00000000000000000000338815%
  - Construction: 0.00000000000000000000169407%
  - Manufacturing: 0.00000000000000000000084704%
  - Wholesale and Retail Trade: 0.00000000000000000000042352%
Safety of food and drink

- Seventeen percent of people — equivalent to 1 billion people worldwide — said they or someone they personally know suffered serious harm in the past two years from the food they eat, and 14% (roughly 823 million people) reported having experienced serious harm from the water they drink.

- Countries and territories that had experienced the most harm from food were those in the developing world; the top three countries were Liberia (52%), Zambia (51%) and Mozambique (45%).

- In some regions, including Eastern and Northern Africa and the Middle East, more people had experienced harm from unsafe food than were worried about it.

- Forty-eight percent of people across the world viewed genetically modified food as more likely to harm than help in the future.

Cyber risk

- Seventy-one percent of people who use the internet recognised at least one of the three main internet-related risks — the biggest concern was 'fake news,' ahead of fraud and cyberbullying.

- Fifty-seven percent of internet users across the globe said they worried about receiving false information online.

- Forty-five percent of internet users worried about online fraud. Regionally, Western Europeans were particularly likely to worry about fraud, including at least two-thirds of internet users in Portugal (78%), France (74%), Spain (71%), the U.K. (69%) and Italy (67%).

- Concerns about online bullying were highest in low-income economies, driven by younger populations in these countries and territories.
Climate change risk

- Almost 70% of people worldwide recognised the threat.
- Men generally viewed climate change less seriously than women. While men and women were about as likely to believe climate change represents a ‘very serious’ threat to people in their country in the next 20 years, men (particularly older men) were more likely than women to say that climate change is ‘not a threat at all.’
- People who have experienced serious harm from severe weather conditions and poor quality of air and water were more likely to worry about the effects of climate change.
- People in China — the world’s largest producer of carbon — were less concerned about climate change; just 23% saw it as a ‘very serious’ threat. The U.S., which is the second-biggest carbon emitter in the world, had the highest percentage of climate change sceptics among high-income countries; 21% of people in the U.S. viewed climate change as ‘not a threat at all.’

Worry and Experience Indices

- Globally, the Worry Index scores were higher than the Experience of Harm Index scores. In some cases, this gap was greater than others; these countries and territories may be considered as ‘over-worriers’ when it comes to those specific risks. These countries included Mongolia, Myanmar, Cyprus, Chile and South Korea.
- Conversely, some countries showed only a small gap between worry and experience; Sweden had the smallest gap.
- People in Mozambique expressed the highest level of worry, followed by Guinea, Malawi, Gabon and Lesotho.
- The highest level of everyday risk was experienced in Liberia, followed by Zambia, Mozambique and Malawi. The high risk of harm in these countries was driven by severe weather and unsafe water.
World trust

- People in 25% of the countries and territories polled did not trust their governments to provide critical basic infrastructure (water, food, power).
- Globally, the four governments trusted least to provide critical basic infrastructure were Yemen, Afghanistan, Lebanon and Iraq.
- Governments with the best perceived record of provision of critical basic infrastructure included Singapore and the United Arab Emirates.
- Countries in Eastern Europe had particularly low levels of trust in their governments to keep their food and water safe.
Acknowledgements

The Lloyd’s Register Foundation are grateful to a wide range of organisations and individuals who have contributed to the World Risk Poll in a variety of ways. We have been inspired by the enthusiasm of our strategic impact partners who have invested time in developing the questionnaire, and are now actively considering how to embed the data in their work with communities and empower people to take action. You can follow their journeys, and the change created, through the Poll website.

The Technical Advisory Group for the World Risk Poll was convened in early 2019, and we are indebted to the time and effort voluntarily invested by the members in the analysis, planning and reviewing of the report. The members of the Technical Advisory Group are Dr. Alexandra Freeman, Mr. Gareth Kirkwood, Dr. Siaka Lougue, Ms. Susan Maybud, Professor Alison Park and Professor Paul Slovic.

The analysis and reporting phase of the 2019 Poll started just as the COVID-19 pandemic was taking hold, and we are particularly grateful to individual colleagues at Gallup for continuing to deliver the project.
The Lloyd's Register Foundation World Risk Poll Report 2019

Introduction

The Lloyd's Register Foundation World Risk Poll is an unprecedented global study of how people understand risk in 142 countries and territories, the poll supports the Foundation's mission of making the world a safer place by asking people about their perceptions, attitudes and experiences of risk. To improve safety and reduce harm, communities, policymakers and safety professionals need to better understand how people make decisions when facing risks. While considerable literature and evidence on this exists for some countries and territories, there are significant data gaps — especially in developing countries. The World Risk Poll helps address these gaps by asking people directly about their risk perceptions.

People often make decisions about risk based on perceptions rather than statistics and evidence — a practice that can be costly to individuals and society. The World Risk Poll focuses much-needed attention on the gaps between perceived risks (how much people worry about risks materialising and causing harm) and the statistical reality of risks (the likelihood or probability that those risks could materialise and cause harm).

The World Risk Poll provides data and evidence to inform policy, research and interventions to improve people’s safety.

The data discussed in this report represent the results of a set of common hazards, including unsafe food, unsafe water, severe weather events and crime. The poll also provides globally comparable data on the causes of common workplace injuries.

References:


3. The Gallup World Poll continually surveys residents in more than 150 countries and territories, representing more than 98% of the world’s adult population, using randomly selected, nationally representative samples. Gallup typically surveys 1,000 individuals in each country, using a standard set of core questions that has been translated into the major languages of the respective country. For more information about Gallup’s World Poll, please visit https://www.gallup.com/analytics/232838/world-poll.aspx.
Key research themes

The following topics included in the 2019 World Risk Poll questionnaire are explored fully throughout the report:

1. Personal risk identification and experience: Analyses the biggest safety threats people report facing and experiencing in their daily lives. Research shows that experience shapes people's attitudes toward risk and safety (Chapters 2 and 3).

2. Broader perceptions of risk: Captures the level of worry people have about specific risks, their perceived likelihood of those risks causing them harm and whether they or someone they know has experienced injury from those risks. The World Risk Poll also explores societal or emergent risks such as climate change and severe weather events (Chapters 2, 3 and 6).

3. Occupational risks: at work as well as responsibility for safety in the workplace (Chapter 5).

4. Technology risks: Examines risk perceptions related to using the internet and social media, as well as perceived risks and rewards of artificial intelligence (AI) — i.e., whether people believe machines or robots that can think and make decisions will mostly help or mostly harm people in their country in the next 20 years (Chapters 7 and 8).

5. Sources of safety information and trust in those sources, with emphasis on unsafe food: knowing what sources people trust can impact the effectiveness of risk communication and mitigation strategies, especially in emergency-type situations (Chapters 4 and 9).

6. Regulation, control, responsibilities and mitigation: Covers regulatory aspects of safety, as many studies have shown that a society's attitudes toward regulation can predict increased risk and reduced safety (Chapters 4 and 5).

7. Background information, social relations and context: Borrows is relevant in helping frame communication around safety and risk (these items are cross-analysed in several chapters, including Chapters 1 and 10).
The COVID-19 pandemic underscores the importance of understanding people's perceptions of risk and safety.

The data in this report were collected in 2019 — before the COVID-19 pandemic — which uniquely positions the World Risk Poll as the only global comparative dataset on how people perceived risk in advance of how communities responded.

Many factors influence how people and communities have reacted to the COVID-19 pandemic. The broader literature on public perceptions and attitudes toward risk offers some potential explanations for people's responses, including psychological and social factors such as:

- underestimating the severity and likelihood of serious harm from the source of risk
- overconfidence in the ability of individuals, institutions or their communities to handle the risk
- reliance on poor or untrustworthy information sources
- unwillingness or inability to impose community-wide restrictions (e.g., for cultural, economic, political or institutional reasons)

In the coming years, analysts will scrutinise the response to the COVID-19 crisis on risk perceptions worldwide, and two further waves of the survey (in 2023 and 2025) will track how perceptions change in the longer term.

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A better understanding of how people perceive and experience risks will help communities, researchers, safety professionals and policymakers engineer a safer world.

The World Risk Poll also will have broad, long-term significance for public safety programmes. Measures to improve people's health and safety often fall short because they do not resonate with the people they are trying to reach. Public buy-in and trust in expert advice are essential for the adoption of safety measures. If experts fail to engage with people when they are formulating or communicating measures — either in the workplace\(^\text{11}\) or in society more broadly\(^\text{12}\) — they will likely get relatively poor reception. The more evidence-informed approach to understanding how people perceive risk that the World Risk Poll offers can help policymakers and safety professionals engage better with communities that bear risk, thus leading to more effective safety interventions.


Chapter 1:
How safe do we feel?

Key findings

1. People generally felt about as safe or safer than they did five years ago. Many people said they felt safer at the time of the survey in 2019 than they did five years before. An additional 36% said they felt 'less safe.'

2. Feelings of safety were associated with perceptions of the economy and law enforcement. At the country level, people were more likely to feel safe if they believed the local job market and their living standards were improving. An additional 36% said they felt 'less safe.'

3. Socially and economically vulnerable people felt the least safe. Women in low-income economies, in high-income economies, fewer women than men felt their lives were in danger.

4. More people worldwide associated risk with danger than with opportunity. Six in 10 people (60%) worldwide said the word 'risk' makes them think more of danger than opportunity, while more than two in 10 (21%) said the reverse.

5. People with more education were more likely to associate the word 'risk' with opportunity. People with 16 years of education or more were more likely than those with eight years of education or less to think of opportunity when they hear the word 'risk.'
Insight into action

For most of the world, the word ‘risk’ meant danger, something to be avoided. However, for some — including those living in higher-income economies and those with higher levels of education — the word risk was associated with opportunity. People’s perceptions of risk also varied significantly by the overall ‘risk environment’ in which they live.

Policymakers and safety professionals need to be mindful of these differences when they design safety interventions and use them as a starting point for engaging people in discussions about risk and safety.

Main research questions and topics

• Do people worldwide feel safer, less safe or about as safe today compared to five years ago? What factors help explain why they feel this way?
• How many people around the world interpret ‘risk’ as opportunity rather than danger? How do these interpretations vary by region, country or economic circumstance?

World Risk Poll questions examined in this chapter

• ‘Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?’
• ‘When you hear the word ‘risk,’ do you think more about opportunity or danger?’
Perceptions of safety

The past few decades have seen dramatic improvements in life expectancy, specifically for women and children, with medical advances reducing maternal and child mortality rates. Yet, worldwide, progress has been uneven, as billions of people still live in peril. Social and economic instability continue to be sources of insecurity for people everywhere. When people were asked if they felt more safe or less safe than they did five years ago, their responses were often different from the narrative offered by the official statistics on crime, accidents and mortality rates.

People generally felt about as safe or safer than they did five years ago.

As shown in Chart 1.1, worldwide, slightly more than one in three people (36%) said they felt safer in 2019 compared to five years prior. One in four (25%) said they felt less safe, and most of the remainder felt about as safe.

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

---

Chart 1.2 shows that people living in upper-middle-income economies (based on World Bank classifications) were most likely to feel safer than they did five years ago, with nearly half—(47%)—feeling this way. Conversely, people in high-income economies were more likely to feel less safe than to feel safer, although most said they felt about as safe as they did five years ago. These results may seem surprising, given that people in higher-income economies tend to have a better-developed infrastructure, stronger security institutions and lower levels of workplace injury. However, rising income inequality and declining opportunities for workers with fewer years of education have contributed to a growing sense of unease in even the most economically developed countries and territories.

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

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15 As defined by the World Bank’s country income groups, listed online at https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups
16 Because regional and country-group results were weighted by countries’ population size, results among the upper-middle-income country group were driven largely by China residents, who made up 56% of the total 39-country group. If China is removed from this group, the percentage who felt ‘more safe’ declines sharply to 24%.
Regional perceptions of safety

As shown in Chart 1.3, Eastern Asia was the only region where people were more likely to say they felt more safe compared to five years ago, at 59%.

Socially and economically vulnerable people felt the least safe.

In Southern Africa and Latin America/Caribbean — two regions with some of the highest violent crime rates and levels of income inequality in the world — slightly more than half of adults said they felt less safe in 2019 compared to five years ago.

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**Chart 1.3**

Perceptions of current safety compared to five years ago, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>% More safe</th>
<th>% About as safe</th>
<th>% Less safe</th>
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<tbody>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>22</td>
<td>25</td>
<td>52</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>31</td>
<td>18</td>
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<td>Eastern Africa</td>
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<td>18</td>
<td>40</td>
</tr>
<tr>
<td>Central/Western Africa</td>
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<td>Southern Asia</td>
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<td>Northern/Western Europe</td>
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<td>Northern America</td>
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<td>Australia &amp; New Zealand</td>
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<td>Eastern Asia</td>
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</tr>
</tbody>
</table>

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

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22 Population-weighted regional results from Southern Africa were driven largely by data from South Africa, which accounts for 89% of the region's total population. South Africans and Namibians were considerably more likely to say they felt less safe at the time of the survey compared to five years ago, at 52% and 55%, than were people in Botswana (36%), Lesotho (33%) and Swaziland (22%).
Perceptions of safety by country

People living in countries and territories that have witnessed political and economic instability expressed widespread feelings of insecurity. Countries and territories at the top of the ‘less safe’ list include Lebanon, Hong Kong, and Venezuela (Table 1.1).

Chart 1.4
World map: Percentage who felt ‘less safe’ compared to five years ago

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

Table 1.1
Countries and territories where people were most likely to feel ‘less safe’ compared to five years ago

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?
Lebanon: Large anti-government protests erupted in October 2019, drawing hundreds of thousands of Lebanese to the streets. The protests led to the government's resignation on Oct. 29, 2019, but the country remains mired in economic and political turmoil.23

Hong Kong: Months of nonstop civil unrest began in June 2019, when millions of residents protested a bill that would have allowed residents to be extradited from Hong Kong to China. Over time, the protesters' goals grew to encompass broader democratic reforms. The Gallup World Poll finds that the proportion of the city's residents who had confidence in their local police plummeted to 43% in 2019, from 80% in 201724.

Afghanistan: In 2017 and 2018, there was a surge in Taliban attacks. According to the Gallup World Poll, in 2019, only 13% of Afghans said they felt safe walking alone at night in their area; this figure was the lowest in the world.26

Venezuela: Venezuela is in a full-scale humanitarian crisis after a near-total economic collapse in the latter half of the 2010s that has led to hyperinflation, the breakdown of public services and the takeover of entire towns by armed gangs. The country has also been in political turmoil since President Nicolás Maduro’s re-election in 2018.27

---


People in some of the fastest-growing economies were most likely to feel safer.

Respondents from Rwanda and China were among the five countries and territories where people were most likely to say they felt safer in 2019 than they did five years before; two in three people in each country responded this way. The nature of the political systems in both countries appears to promote social stability, even if at the expense of restricting political and civil freedoms.

These two countries—as well as Ethiopia, where 55% of people said they felt safer—were among the world’s 20 fastest-growing economies in 2019.

Rwanda: President Paul Kagame has won popular support for successfully stabilising and transforming Rwandan society after the devastation wrought by the 1994 genocide. The country has seen notable improvements in health and economic outcomes over the past 20 years. While Kagame’s government has been criticised for restricting people’s civil and political rights in the name of preventing a return to ethnic violence, this approach coincides with a general sense of safety and security among Rwandans.

China: Economic optimism persists in China even though the country’s breakneck economic rise has slowed in recent years. The proportion of Chinese who said their standard of living was improving increased from an already-high 76% in 2015 to 82% in 2019. The latter figure was second only to Uzbekistan among the 142 countries and territories surveyed worldwide.

Table 1.2

<table>
<thead>
<tr>
<th>Countries and territories</th>
<th>% More safe</th>
<th>% About as safe</th>
<th>% Less safe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rwanda</td>
<td>67</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>China</td>
<td>66</td>
<td>26</td>
<td>6</td>
</tr>
<tr>
<td>Laos</td>
<td>61</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>58</td>
<td>35</td>
<td>6</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>55</td>
<td>13</td>
<td>33</td>
</tr>
</tbody>
</table>

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

---


31 Based on the Gallup World Poll’s annual China surveys, 2015-2019.
Perceptions of safety among men and women

As shown in Chart 1.5, at the global level, slightly more women than men reported feeling less safe than they did five years ago — 27% versus 23%, respectively. However, the gender gap was more pronounced at the country-income level. At the time of the survey in 2019, more women than men in higher-income economies said they felt less safe compared to five years ago. Notably, these gender gaps were nearly nonexistent in low-income economies.

Chart 1.5

Percentage who felt ‘less safe’ compared to five years ago, by gender and country income group

<table>
<thead>
<tr>
<th>Gender</th>
<th>World</th>
<th>Low income</th>
<th>Lower-middle income</th>
<th>Upper-middle income</th>
<th>High income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>27</td>
<td>40</td>
<td>27</td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td>Men</td>
<td>23</td>
<td>41</td>
<td>25</td>
<td>18</td>
<td>23</td>
</tr>
</tbody>
</table>

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

These differences underscore the need for more research into the root causes of the gender gaps in specific countries and territories. In the U.S., for example, women’s responses were more closely associated than men’s with confidence in local police. Half of U.S. women (51%) who lacked confidence in the police said they felt less safe than they did five years ago. Among U.S. men who lacked confidence in the police, one-third (33%) said they felt less safe.

As will be seen in every chapter of this report, attitudes toward risk and safety often differ according to gender and socioeconomic status across multiple dimensions related to risk.

---

Safety perceptions and economic security

Globally, feelings about personal security are linked to people’s feelings about economic security and crime or instability in their environment. Prior studies have shown that population segments that feel more socially and economically vulnerable, such as those struggling with poverty, are more sensitive to potential hazards than those who feel less vulnerable33.

Feelings of safety were associated with perceptions of the economy and law enforcement.

Chart 1.6 demonstrates that people were more likely to feel less safe than they did five years ago if they felt their living standards were getting worse or they lacked confidence in their local police.

<table>
<thead>
<tr>
<th>Results by standard of living</th>
<th>Percentage</th>
<th>Results by confidence in local police</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>People who feel their standard of living is getting better</td>
<td>46</td>
<td>People who have confidence in their local police</td>
<td>30</td>
</tr>
<tr>
<td>People who feel their standard of living is getting worse</td>
<td>23</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>% More safe</td>
<td>% About as safe</td>
<td>% Less safe</td>
<td>% More safe</td>
</tr>
<tr>
<td>18</td>
<td>34</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>42</td>
<td>44</td>
<td></td>
</tr>
</tbody>
</table>

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

Similarly, at the country level, people’s responses were related to economic growth and protracted political or social instability in their country or territory. Though the likelihood of people saying they felt improved rather than declined34.

That relationship merits further research, as it suggests the changes that tend to be associated with strong growth rates, such as improved economic security and social stability, may be relevant factors when people consider whether their lives are becoming more or less safe.


34 To test for relationships between safety perceptions and other country-level indicators, responses to this question were treated as a scale, with 1=more safe, 2=about as safe and 3=less safe. The R=0.033 correlation between average country scores and current per-capita GDP is statistically insignificant at the p=.05 level, but the correlation with countries’ 2018 GDP growth rates is significant at R=0.468.
Risk: Opportunity or danger?

Personal, demographic, socioeconomic and cultural factors influence a person's attitudes toward risk. The word 'risk' itself can mean different things to different people and in different languages.

More people worldwide associated ‘risk’ with danger than with opportunity.

Chart 1.7 shows that regionally, people in Central Asia were the most likely to associate risk with opportunity. People in Latin America and the Caribbean — a region where feelings of insecurity are widespread — were most likely to associate risk with danger.

Survey question: When you hear the word ‘risk’, do you think more about opportunity or danger?

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People in higher-income economies were generally more likely to see risk as an opportunity rather than danger. In the 19 countries and territories where at least one in three people said risk signifies opportunity rather than danger, 14 are classified as high-income or upper-middle-income economies. Moreover, oil-rich countries and territories in the Arab Gulf were among those in which relatively high proportions of people thought of risk as opportunity. Most people in the United Arab Emirates (57%) responded this way, as did more than one-third of those in Bahrain (44%), Kuwait (37%) and Saudi Arabia (34%).

The view of risk as opportunity was also significantly higher than the global average in Germany (39%), Slovenia (38%), Austria (34%) and the U.S. (34%).

**Linguistic differences and risk**

How people interpret the word ‘risk’ can depend on the meaning that the term carries in their language. Among people interviewed in six of the world’s most commonly spoken languages (see Chart 1.8), English and Russian speakers were most likely to say risk makes them think of opportunity, with more than one in four saying this. Spanish speakers were least likely to respond this way, at 12%, generally reflecting the low percentage of Latin Americans (11%) who viewed risk as opportunity. Similarly, 12% of people in Spain thought of risk as opportunity.

**Chart 1.8**

<table>
<thead>
<tr>
<th>Language</th>
<th>% Opportunity</th>
<th>% Danger</th>
<th>% Both</th>
<th>% Neither</th>
<th>% Do not know/refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>12</td>
<td>85</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>French</td>
<td>15</td>
<td>79</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Arabic</td>
<td>18</td>
<td>65</td>
<td>10</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Chinese</td>
<td>21</td>
<td>44</td>
<td>13</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Russian</td>
<td>27</td>
<td>67</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>English</td>
<td>26</td>
<td>56</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
</tbody>
</table>

Survey question: When you hear the word ‘risk’, do you think more about opportunity or danger?

These results should be interpreted with caution, as more research is needed regarding how the word ‘risk’ is interpreted in each language.
Gender and risk

Worldwide, slightly more men (23%) than women (19%) associated risk with opportunity. Chart 1.9 demonstrates.

Survey question: When you hear the word ‘risk’, do you think more about opportunity or danger?

In 14 countries and territories, the proportion of men who saw risk as opportunity was more than 10 percentage points higher than the proportion of women who viewed risk this way. The largest gaps were present in countries such as Bahrain, where 51% of men saw risk as opportunity versus 30% of women, Austria (42% versus 26%), Japan (21% versus 8%) and the U.S. (40% versus 28%).

Conversely, in some lower-income countries including Liberia, Uganda and Mali, women were somewhat more likely than men to view risk as opportunity.
Other demographic factors and risk

As shown in Chart 1.10, the tendency to associate risk with opportunity was somewhat more common among people with higher levels of education and those with positive views of their standard of living.

People with more education were more likely to associate the word 'risk' with opportunity.

Chart 1.10
Risk: Opportunity or danger, by education level and feelings about household income

Survey question: When you hear the word 'risk,' do you think more about opportunity or danger?

More notably, 29% of people worldwide who said they were 'living comfortably' on their current income saw risk as opportunity, compared with 18% of those who were 'finding it very difficult' to get by on their current income.

As shown in Chart 1.10, the tendency to associate risk with opportunity was somewhat more common among people with higher levels of education and those with positive views of their standard of living.

People with more education were more likely to associate the word 'risk' with opportunity.

More notably, 29% of people worldwide who said they were 'living comfortably' on their current income saw risk as opportunity, compared with 18% of those who were 'finding it very difficult' to get by on their current income.

Referring to the chart:

<table>
<thead>
<tr>
<th>Education Level</th>
<th>% Opportunity</th>
<th>% Danger</th>
<th>% Both</th>
<th>% Neither</th>
<th>% Do not know/refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8 years education</td>
<td>20</td>
<td>55</td>
<td>7</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>9-15 years education</td>
<td>22</td>
<td>64</td>
<td>7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16+ years education</td>
<td>25</td>
<td>60</td>
<td>11</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feeling about Income</th>
<th>% Opportunity</th>
<th>% Danger</th>
<th>% Both</th>
<th>% Neither</th>
<th>% Do not know/refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living comfortably on current income</td>
<td>29</td>
<td>58</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Getting by on current income</td>
<td>21</td>
<td>60</td>
<td>8</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>$500-$1000 on current income</td>
<td>19</td>
<td>62</td>
<td>7</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>$1500-$2000 on current income</td>
<td>18</td>
<td>62</td>
<td>8</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

Due to rounding, percentages may sum to 100% +/- 1%.

These results align with existing research on risk aversion that shows those with lower socioeconomic status are less likely to think of risk as opportunity because threats such as economic and financial difficulties and crime are more pervasive in their daily lives.

Chapter 2:
The sources of greatest risk in people’s lives

Road-related risks were the biggest perceived threat to people’s safety. People in high-income countries were more likely to name road-related risks among the top two threats to their safety than people in lower-income countries. However, official statistics show low-income countries generally have higher traffic-related fatality rates.

Crime and violence were generally perceived as bigger threats in regions and countries with high income inequality. People in Latin America/Caribbean and Southern Africa were most likely to say threats related to crime and violence were among the two biggest threats to their safety.

Health-related risks were cited more in regions with aging populations and relatively weak healthcare infrastructures. Most of the 12 countries and territories where more than 40% of people cited health problems as the first or second biggest safety threat were in eastern parts of Europe.

Many people did not think they faced any safety risks. At the global level, 19% of people gave ‘no risk’ as their first response, and an additional 21% said ‘no risk’ as their second.
Insight into action

People's top-of-mind responses regarding the two greatest threats to their safety in their daily lives provide insight into the relative importance people assign to risks and the perceived likelihood of being harmed. Responses largely reflect the local socioeconomic, cultural, demographic and political circumstances that can influence perceptions that risk could cause harm.

For example, in low-income countries and territories, the dangers associated with widespread poverty, violence and instability were often perceived to be the greatest sources of threat to safety. This is often the case even if technical experts and official government statistics show that other risks, such as pollution or road-related accidents, may be more harmful.

The results demonstrate that safety professionals need to tailor public outreach and risk awareness campaigns to each community's circumstances and needs, taking into account local context and people's safety priorities.

Main research questions and topics

- What types of risks do people worldwide perceive as the greatest sources of risk to their safety in their daily lives?
- How do the results differ by country, region and economic development level? How do they differ by characteristics such as gender, age, education and income levels?
- How closely do people's top-of-mind (unprompted) responses correspond with official statistics on the harm these risks cause?

World Risk Poll questions examined in this chapter

- In your own words, what is the greatest source of risk to your safety in your daily life?
- Other than what you just mentioned, in your own words, what is another major source of risk to your safety in your daily life?
When the World Risk Poll was conducted in 2019, question inviting respondents to name the top single threat to their safety was that they do not face any risks in their daily lives, at 19%. An additional 10% said they percent named road-related accidents or injuries as the biggest threat in their daily lives, while 12% cited crime, violence or terrorism. Eleven percent said personal health problems were the biggest risk to their safety in their daily lives.

When asked for the second or next biggest risk to their safety, more than half of people (55%) either mentioned ‘no risks,’ did not know or, because they named no safety, more than half of people (55%) either mentioned ‘no risks,’ did not know or, because they named no 11% said personal health problems were the biggest risk to their safety in their daily lives.

### Chart 2.1

Top two perceived risks to people’s safety, global results

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing/no risks</td>
<td>40%</td>
</tr>
<tr>
<td>Road-related accidents/injuries</td>
<td>23%</td>
</tr>
<tr>
<td>Crime/violence/violence</td>
<td>19%</td>
</tr>
<tr>
<td>Health: personal health condition/illness</td>
<td>18%</td>
</tr>
<tr>
<td>Other</td>
<td>11%</td>
</tr>
<tr>
<td>Economy-related, such as unemployment, high prices</td>
<td>8%</td>
</tr>
<tr>
<td>Financial: not having enough money</td>
<td>8%</td>
</tr>
<tr>
<td>Climate change/natural disasters/weather-related events</td>
<td>6%</td>
</tr>
<tr>
<td>Cooking or other household accidents/injuries</td>
<td>4%</td>
</tr>
<tr>
<td>Other transportation-related accidents/injuries</td>
<td>3%</td>
</tr>
<tr>
<td>Work-related accidents: physical injuries</td>
<td>3%</td>
</tr>
<tr>
<td>Politics/political situation/corruption</td>
<td>3%</td>
</tr>
<tr>
<td>Health: drugs, alcohol, smoking</td>
<td>2%</td>
</tr>
<tr>
<td>Pollution</td>
<td>2%</td>
</tr>
<tr>
<td>Mental stress/exhaustion</td>
<td>1%</td>
</tr>
<tr>
<td>Water supply or drinking unclean water</td>
<td>1%</td>
</tr>
<tr>
<td>Internet/technology-related risks</td>
<td>1%</td>
</tr>
<tr>
<td>Drowning</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?
The top two risks named varied by country income level. Financial or economic problems were the biggest perceived dangers among people living in countries as low-income, with nearly three in 10 and transportation-related injuries were the top-mentioned risks in high-income countries and territories. Similar patterns were evident in the regional results.

As shown in Chart 2.2, road-related risks were mentioned most in economically developed regions, including Northern/Western Europe, Northern America and Australia/New Zealand. Crime and violence were most commonly named in Latin America/Caribbean and Southern Africa, two regions struggling with high violent crime rates.

Health-related risks were named most in regions with aging populations and/or relatively weak healthcare infrastructures, such as Eastern Europe. Financial and economic problems were cited by more three African regions and the Middle East, where low oil prices have hurt many of the region’s economies in recent years.


2. Since the World Risk Poll was conducted in 2019 prior to the onset of the coronavirus pandemic, health-related responses do not include COVID-19 mentions.


Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?
Chart 2.2
Top two perceived risks to people's safety, by region

1. Road/transport-related
2. Health/illness
3. Crime/violence
4. Financial/economic problems
5. Environment/natural disasters/weather
6. Food- or water-related
7. Political/institutional problems

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?
Road- and transportation-related risk

When the World Risk Poll was conducted in 2019, road- and transportation-related hazards were named among the two biggest threats to people’s safety. The almost one in four adults who mentioned these risks translate into more than 1 billion people worldwide. The official statistics provide some justification: The World Health Organization (WHO) estimates that 20-50 million people sustain road traffic-related injuries each year. Further, these injuries are leading causes of death and were responsible for an estimated 1.3 million deaths worldwide in 2018.4

Road-related responses were most common in economically developed countries and territories. As Chart 2.3 shows, Norway was one of only four countries worldwide in which more than 50% of people named road or transportation hazards as the first or second biggest safety threat. According to WHO statistics, Norway and Switzerland had the lowest number of traffic fatalities per 100,000 people in 2016, at 2.7. Conversely, two countries where people were least likely to name road-related accidents — Rwanda (7%) and Madagascar (3%) — have some of the world’s highest traffic fatality rates, at 29.7 and 28.6 fatalities per 100,000 people, respectively.5

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5 Road traffic deaths | Data by country. (n.d.). World Health Organization. All traffic fatality rate estimates are based on 2016 WHO data except Yemen (2013). Data retrieved April 29, 2020, from https://apps.who.int/gho/data/node.main.A997

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**Chart 2.3**

Countries where people were most and least likely to name road-related hazards among the top two threats to their safety

<table>
<thead>
<tr>
<th>Country</th>
<th>% Who name road or transport hazards</th>
<th>Traffic fatalities per 100,000 residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>59</td>
<td>7.8</td>
</tr>
<tr>
<td>Finland</td>
<td>54</td>
<td>4.7</td>
</tr>
<tr>
<td>Australia</td>
<td>51</td>
<td>5.6</td>
</tr>
<tr>
<td>Norway</td>
<td>51</td>
<td>2.7</td>
</tr>
<tr>
<td>Israel</td>
<td>49</td>
<td>4.2</td>
</tr>
<tr>
<td>Rwanda</td>
<td>29.7</td>
<td>7</td>
</tr>
<tr>
<td>Yemen</td>
<td>21.5</td>
<td>6</td>
</tr>
<tr>
<td>Iran</td>
<td>20.5</td>
<td>5</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>11.5</td>
<td>3</td>
</tr>
<tr>
<td>Madagascar</td>
<td>28.6</td>
<td>3</td>
</tr>
</tbody>
</table>

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?
The prevalence of more pressing risks to daily life in lower-income economies may explain why people in these countries and territories were less likely to mention road-related risks than people in higher-income economies. People living in low-income economies often face extreme poverty, poor infrastructure, and weak public services, all of which form relatively more immediate threats to safety in daily life than road-related risks. Therefore, these threats may overshadow road-related risks despite the statistics that show how many people are injured in road accidents.

People in low-income economies were also less likely to see themselves being in a road-related accident in the near future. When asked to estimate the likelihood that they might be in a traffic accident in the next two years, people in low-income economies gave lower estimates than people in higher-income economies.

In their own words: Risks on the road

Road- or transportation-related risks weighed heavily on many people’s minds, and their verbatim responses gave insights as to why.

* ( - 2* ) /6* ( 2* ) /6* 2 # 4* - 6* and the threat of being harmed, making it seem likely that road- or transport-related harm was a top risk.

Being on the road driving, there is the possibility of injury every day, other potential sources of risk are less likely.

— Australian respondent

Notably, 51% of people in Australia named road- and transportation-related risks as a top threat to their safety.

Many people also saw the biggest source of road-related risk coming from other drivers.

I always think I can get in an accident because of the speeds the drivers are going.

— Ghanaian respondent

People also mentioned drunk drivers as a major safety risk.
Differences in perceived risks across demographic groups were apparent among people who mentioned road- and transportation-related hazards as their top safety risks.

For example, Chart 2.4 shows that, for all age groups, more men than women mentioned these risks as their biggest threat. Older people also were somewhat less likely than younger people to mention these risks as a bigger threat. Older people also were somewhat less likely than younger people to mention road- and transportation-related hazards as their top two threats to safety by gender and age.

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?

One in three people (31%) who said they were ‘living comfortably’ on their present income named road-related concerns as one of their top two safety risks, compared to about one in five of those who were finding it ‘difficult’ (21%) or ‘very difficult’ (19%) to get by on their present income.

Similarly, people with 16 or more years of education were twice as likely to respond this way as those with eight years of education or less, at 34% versus 17%, respectively. Urban dwellers (25%) were also slightly more likely than rural dwellers (21%) to name road-related hazards as their most significant safety concerns.

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12 Gallup World Poll question wording: Which one of these phrases comes closest to your own feelings about your household's income these days? Living comfortably on present income, getting by on present income, finding it difficult on present income, finding it very difficult on present income.
Risks related to crime and violence

Chart 2.5 demonstrates how crime and violence were perceived as a threat to safety in daily life worldwide. Globally, more than one in six people (19%) named crime, violence or terrorism as one of the two greatest threats to their safety. Among the countries and territories surveyed, the threat of violence was most commonly named in Afghanistan, which has been in an almost constant state of war since 1979\(^\text{13}\). More than eight in 10 Afghans (82%) named crime, violence or terrorism as safety threats. Brazil, where nearly seven in 10 people (68%) mentioned these threats.


---

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?

Eleven of the 17 countries where at least 50% of people named crime or violence as one of their greatest sources of risk were in Latin America (59%). An Economist report noted that while Latin America contained 8% of the world's population, it accounted for 38% of criminal killings\(^\text{14}\). El Salvador has the world's highest homicide rate, at 61.8 per 100,000 people, followed by Jamaica (57), Venezuela (56.3) and Honduras (41.7)\(^\text{15}\).


According to a 2017 World Bank report, the concentration of people in cities with high levels of poverty, unemployment and inequality dramatically increases the risk of violence in most Latin American countries16. Violence as the greatest risks. Two-thirds of South Africans (67%) live in cities17, and the country’s homicide rate is one of the highest in the world, at 35.9 per 100,000 people18.

In most regions, more women than men named crime and violence among their biggest risks.

Count 2.6
Percentage who named crime or violence among the top two threats to their safety, by gender and region

<table>
<thead>
<tr>
<th>Region</th>
<th>% Women</th>
<th>% Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>59</td>
<td>57</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>58</td>
<td>61</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>27</td>
<td>24</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>Northern America</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Middle East</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Central Asia</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?

The Lloyd’s Register Foundation World Risk Poll Report 2019

A Gallup World Poll question that asks people if they feel 
feelings of insecurity in these countries. In 2019, 85% of 
Australian men said they felt safe, compared with 47% of 
Australian women. This 38-point gap is the largest in the 
world for this question. New Zealand also had a sizable 
24-point gap, with 82% of men saying they felt safe 
recent episodes of violence against women, including 
the murders of two young women in Melbourne, 
Australia19

Looking at the World Risk Poll data by region, the 
questions asks both men and women about violence, it does 
such as domestic violence against women. Chapter 3
work. Both are analysed by gender and other key 

19 Mao, F. (2019). How dangerous is Australia for women? BBC News: 

legal/submission/violence-against-women-australia-2017

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Existing literature has shown a relationship between income inequality and violent crime rates. As shown in Chart 2.7, the World Risk Poll finds that, worldwide, the proportion of people who named crime or violence among the top two threats to their safety tended to rise with the level of income inequality in a country (as measured by the GINI coefficient).

Countries in Southern Africa and Latin America/Caribbean have some of the world’s highest levels of economic inequality. Eleven of the 20 countries with the highest GINI coefficients worldwide are in the Latin America/Caribbean region.

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?

---


24 R=0.553, using World Bank GINI estimates, retrieved April 25, 2020, from https://data.worldbank.org/indicator/SI.POV.GINI;

25 The GINI index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A GINI coefficient of 0 represents perfect equality, while a coefficient of 100 implies perfect inequality. https://datacatalog.worldbank.org/gini-index-world-bank-estimate-1

The relationship between income inequality and low levels of economic development. Higher levels of insecurity and violence deepen inequality and potentially delay economic progress. In turn, high levels of inequality, coupled with inadequate development, erode public safety.

To break this cycle and reduce insecurity, governments need to engage people at all levels — local, state, national and regional — to work together and build consensus. Gaining the trust of many people who, according to the World Risk Poll, see violence and crime as a top threat to their safety because it largely matches their experiences.

**Health- and illness-related sources of risk**

Chart 2.8

*World map: Percentage who named health-related problems among the top two threats to their safety*

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serbia</td>
<td>50%</td>
</tr>
<tr>
<td>Poland</td>
<td>47%</td>
</tr>
<tr>
<td>Croatia</td>
<td>47%</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>5%</td>
</tr>
<tr>
<td>Libya</td>
<td>4%</td>
</tr>
<tr>
<td>Myanmar</td>
<td>3%</td>
</tr>
</tbody>
</table>

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?

---


28 Since the World Risk Poll was conducted in 2019 prior to the onset of the coronavirus pandemic, health-related responses do not include COVID-19 mentions.
Health-related risks were cited more in regions with aging populations and relatively weak healthcare infrastructures.

Notably, while people’s likelihood to name health problems as a top threat is related to their country’s mortality rate\(^29\), it is not across countries. In every region, this seeming discrepancy was driven by older people, who were more likely to name health problems as one of their biggest risks. At the global level, those aged 65 and older were twice as likely as those aged 15 to 29 to respond this way (26% versus 13%). There were few other notable differences by demographic groups, though there was a slight gap between women (20%) and men (17%).

In countries and territories with a lower average life expectancy, older people make up a smaller portion of the population, reducing the total possible number of people for whom health-related hazards could be top-of-mind. As shown in Chart 2.9, health issues were less commonly mentioned as a top threat in countries and territories where more people die by injury\(^30\).

---

\(^{29}\) R=0.525 using World Bank crude death rate estimates, retrieved April 25, 2020, from https://data.worldbank.org/indicator/SP.DYN.CDRT.IN


---

**Chart 2.9**

Relationship between the percentage who named health concerns as a top threat to their safety and the percentage who die by injury

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?
Health-related problems were most frequently named as a top safety risk in countries and territories in Eastern Europe. Though access to quality healthcare services is worse in less-economically developed regions such as Southern Asia and sub-Saharan Africa, people in these regions were more likely to mention other concerns, such as financial difficulties or the threat of violence.

Why are health risks so prominent in Eastern Europe?

- Eastern European countries have some of the highest mortality rates in the world. Most have ageing populations, and health outcomes tend to be poorer in these countries and territories than in other regions with relatively aged populations, such as Western Europe or developed Eastern Asia.
- The region also has a weaker healthcare infrastructure: Average health expenditure per capita is considerably lower among countries in Eastern Europe than among those in Northern/Western Europe.
- The high numbers of Eastern Europeans who viewed health problems as a threat to their safety underscore the urgency of the healthcare crises facing the region. As those countries’ healthcare systems face mounting demands from their ageing populations, leaders will need to stem the tide of healthcare professionals moving westward for better-paying jobs.

---

Risks from economic and financial difficulties

Economic problems were among the two biggest threats to their safety. These responses varied little among most major demographic groups at the global level. (1) 2% of people said they were living comfortably or getting by on their present household income were less likely to cite financial problems than those who were finding it difficult or very difficult to get by. Many countries and territories where people were most likely to name financial or economic issues are categorised by the World Bank as low-income economies (see Chart 2.10). Rwandans were the most likely to name economic difficulties as one of the biggest threats to their safety, with 74% of people mentioning economic difficulties. In describing these difficulties, several Rwandans mentioned concerns about their pensions or anxiety about new property taxes. Notably, Rwandans were less likely than people in most other African countries to name crime and violence as the biggest safety threats. Other countries and territories where people were most likely to name financial difficulties — such as Niger and Uganda — are among the lowest-income economies in the world. Lebanon and Iran have higher living standards than most other countries in this group, but they are also dealing with economic difficulties. One exception is Lithuania, a high-income country where 43% of people cited economic difficulties as one of the biggest risks. In describing these difficulties, several Lithuanians mentioned concerns about their pensions or anxiety about new property taxes.

---

Risks related to pollution, natural disasters or the environment

Eight percent of people worldwide named concerns about the environment and weather-related risks, including pollution and natural disasters such as hurricanes and earthquakes, among the two greatest risks related to pollution, natural disasters or the environment.

As Chart 2.11 shows, at the country level, Nepalese were the most likely worldwide to name environmental and weather-related problems among the two biggest threats to their safety, at 30%.

Chart 2.11
Countries where people were most likely to name environment- or weather-related problems among the top two threats to their safety

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?

In their own words: The risk of climate change

While 41% of people worldwide see climate change as a serious threat to their country over /#) 3/4*4 - p. #H - (qO) * ( - /#)

6% mentioned this issue as the biggest perceived threat to their safety in their daily lives.

In Australia, several individuals cited climate change-induced droughts as a top threat in their daily lives, with some citing the potential for bush fires - /$- & *(O/ - /O/ ) - 4$*O - 2 - 1* 40. (#) .

Risks related to political or institutional problems

Three percent of people worldwide named political or institutional problems such as government corruption or lack of public services among the two biggest threats to their safety. This figure varied little by major demographic group; however, the likelihood to mention political threats was higher among people who lacked confidence in national institutions.

Two countries or territories where more than 20% of people named political/institutional problems among the top two threats to their safety were Lebanon (24%) and Hong Kong, S.A.R. of China (23%). (See Chart 2.12.) Both countries or territories experienced sustained political unrest in 2019.

Chart 2.12

Chart showing countries where people were most likely to name political or institutional problems among the top two threats to their safety.

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?
Spotlight on: Countries where political or institutional problems were cited among top safety threats

- Eighteen percent of South Koreans named political or institutional risks as one of their two biggest safety threats. After a series of protests, the country’s justice minister was forced to resign in October 2019 amid corruption allegations.

- In Belgium, which has had a caretaker government since its governing coalition fell apart in December 2018, 13% of people named a risk related to politics as a threat to daily safety. The country’s political stalemate has prevented the government from enacting legislation on important issues.

- In the U.S., more than one in 10 people (11%) cited political or institutional problems as one of the two biggest safety threats. Americans witnessed a political crisis stemming from the demands of parties in Catalonia led to a fragmented government and political protests. In November 2019, the country held its fourth general election amid corruption allegations.

- In Spain, where 11% cited political and institutional problems, a political crisis stemming from the demands of parties in Catalonia led to a fragmented government and political protests. In November 2019, the country held its fourth general election amid corruption allegations.

- In Cyprus, where 11% cited political and institutional problems, continues an enduring political conflict between the country’s Greek population in the south and Turkish population in the north. Northern Cyprus operates under a de facto sovereign government international community.


While determining the chief drivers of people’s perceptions that political and institutional problems were their biggest risk requires more analysis, at least anecdotally, the political environment likely is a big factor. The 10 countries where this response was most common represent a broad array of political systems, showing that no type of government is immune to worries of political dysfunction.

**In their own words: Brexit — a risk to daily life?**

‘What is going to happen after Brexit?’

--- British respondent

‘My financial status, Brexit and what would happen to our economy.’

--- Irish respondent

‘Brexit has politicised me. I’ve become more political. I think it is a big risk to us all. We need more democracy.’

--- British respondent

---


Risks related to food or water safety

The WHO estimates that 600 million people — about 8% of the global population — fall ill every year from eating unsafe food, and 420,000 die, with young children and the elderly particularly vulnerable. In 2018, the WHO reported that countries in regions of Africa and Southeastern Asia were least likely to have implemented minimum requirements for food safety.

The WHO also reports that contaminated drinking water annually causes 485,000 deaths from diarrhoea, predominantly in the least developed countries and territories where many communities lack sufficient water or sanitation services. In total, 3% of people worldwide — equivalent to 300 million people — said unsafe food or water were among the two biggest threats to their safety, with 1% citing concerns about their water supply or unclean water and another 2% saying contaminated or unsafe food poses the greatest threat. These figures were consistent across all demographic categories at the global level; however, they were much higher in some countries than in others (see Chart 2.13).

---

**Chart 2.13**

Countries where people were most likely to name food- or water-related risks among the top two threats to their safety

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxembourg</td>
<td>10</td>
</tr>
<tr>
<td>France</td>
<td>7</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>11</td>
</tr>
<tr>
<td>Chad</td>
<td>10</td>
</tr>
<tr>
<td>Mauritania</td>
<td>11</td>
</tr>
<tr>
<td>Lesotho</td>
<td>16</td>
</tr>
<tr>
<td>Malawi</td>
<td>9</td>
</tr>
<tr>
<td>Tanzania</td>
<td>9</td>
</tr>
<tr>
<td>Kenya</td>
<td>9</td>
</tr>
<tr>
<td>Tajikstan</td>
<td>8</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>8</td>
</tr>
<tr>
<td>Brazil</td>
<td>7</td>
</tr>
<tr>
<td>Argentina</td>
<td>6</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>6</td>
</tr>
<tr>
<td>Mexico</td>
<td>5</td>
</tr>
<tr>
<td>United States</td>
<td>4</td>
</tr>
<tr>
<td>Russia</td>
<td>3</td>
</tr>
<tr>
<td>China</td>
<td>2</td>
</tr>
</tbody>
</table>

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?
Concern about food- or water-related risks is linked with various developmental and climate-related indicators, including access to basic drinking water\(^{55}\) and prevalence of drought, floods and extreme temperatures\(^ {56}\). These threats were most commonly cited in sub-Saharan African countries, where these conditions are particularly unfavourable.

\(^{55}\) \(R=-0.427\), based on data from the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, retrieved April 26, 2020, from https://data.worldbank.org/indicator/SH.H2O.BASW.ZS

\(^{56}\) \(R=0.425\), based on data from the OFDA/CRED International Disaster Database, retrieved April 26, 2020, from https://data.worldbank.org/indicator/EN.CLC.MDAT.ZS
People who faced no risks

Intriguingly, worldwide, 19% of people said they faced no risks at all to their safety in their daily lives, and another 21% said they faced no further risks after their first response. People in countries where political rights and civil liberties are more at risk were more likely to say they faced no risks. Eleven of the 20 countries in which more than half of people said they faced no risks — including Myanmar, Uzbekistan, Libya and Turkmenistan — are classified as ‘Not Free’ in Freedom House’s 2020 Freedom in the World Index; seven are classified as ‘Partly Free.’ More broadly, the proportion of people who said they faced no risks tended to fall as countries’ Freedom in the World score rose.

Chart 2.14
Countries where people were most likely to say they faced no risks to their safety

Percentage worldwide who responded ‘no risk’ as their first or second response

Survey question: What is the greatest source of risk to your safety in your daily life? Other than what you just mentioned, what is another major source of risk to your safety in your daily life?

Somewhat counterintuitively, people with fewer years of education were significantly more likely to say they faced no risks than those with nine or more years of education. Nearly half (45%) of those with up to eight years of education said they faced no risk, compared with 32% of those with 16 or more years of education. Nearly half (45%) of those with up to eight years of education said they faced no risk, compared with 32% of those with 16 or more years of education. The proportion of people who said they faced no risks tended to fall as countries’ Freedom in the World score rose.

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57 N=0.295, statistically significant at the p<.01 level. Freedom House data retrieved May 14, 2020, from https://freedomhouse.org/countries/freedom-world/scores
Chapter 3:
The risk perception gap

In general, people tend to assess safety risks through a subjective lens. They consider personal factors when gauging how likely or how seriously whether they, or someone they know, have been harmed by that risk before. Safety professionals and analysts evaluate risk.

In many cases, the gap between people’s ‘instinctive’ approach and one that is more data-driven and analytical results in different attitudes toward risk. To bridge this gap, technical experts need to better understand how and why people perceive risks differently. The World Risk Poll — which brings people’s views on risk to the fore — provides a new contribution to the global dialogue about risk and safety. By taking into account people’s circumstances, experiences and what worries them most and least, safety professionals and experts can engage with communities more effectively about the potential harm posed by various risks.

This chapter explores two aspects of how people perceive risks. The first examines differences between how people and technical experts assess risk by asking people to rate the likelihood of five well-researched negative outcomes happening to them in the next two years (such as being in a traffic accident, being in an aeroplane accident or being struck by lightning). By analysing how people rank these ‘statistically quantifiable’ risks and comparing those rankings against statistical likelihoods, we are able to understand the accuracy of people’s estimates of the likelihood of each risk event.

and comparing those rankings against statistical likelihoods, we are able to understand the accuracy of people’s estimates of the likelihood of each risk event.

Perceptions of risk play a prominent role in the decisions people make, in the sense that differences in risk perception lie at the heart of disagreements about the best course of action between technical experts and members of the general public, men versus women, and people from different cultures.

– Paul Slovic & Elke Weber


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Key findings

1. Large gaps existed between perceived risks and the statistical likelihood of harm. For example, people tended to over-estimate the likelihood of relatively rare hazards — such as aeroplane accidents — in comparison with the statistical likelihood of their being harmed in such an accident.

2. Individual differences may best explain risk perception gaps. Country or regional factors (a proxy for cultural effects) explain only a fraction of the overall differences in individuals’ perception of the likelihood of being harmed by various hazards. Individual factors such as education, gender, income and experience with injuries from a risk played a prominent role in people’s views on the likelihood they will be harmed from specific risks.

3. The majority of people worldwide found understanding percentages somewhat challenging. Only four in 10 people (40%) worldwide correctly answered a question about their knowledge of percentages and proportions. People who understood basic percentages were more likely to assess risks accurately than those who did not.

4. In general, men and women perceived risk differently. Women were likely to worry more than men about particular risks. The findings show that even where men and women had experienced similar levels of harm from particular risks, more women than men worried about those risks.

5. Income level impacted risk perceptions. Overall, people who were comfortable with their current household income worried less about being harmed by various risks than people who were struggling with their present income.

Insight into action

Given the gap between people’s perceptions of risk and experts’ statistical risk assessments, policymakers and safety professionals should seek to understand why people perceive risks the way they do and tailor strategies and interventions to raise people’s awareness of particular risks need to be designed differently for different segments of the population to be effective. It is essential to take into account demographic and socioeconomic contexts. These include the country where people live, whether they have previously experienced harm from a hazard and, more specifically, individual-level factors such as gender, age, education and income levels, all of which influence people’s risk perceptions. Additionally, safety and risk messages need to be designed for all people to understand, not just those with numeracy skills. Because percentages can be relatively challenging for many people to understand, it may be beneficial to avoid using percentages too often in safety campaigns.
Main research questions and topics

• How well does people’s perceived likelihood of risk align with the statistical likelihood that these risks could
  happen? (#(U
• What is the gap between how much people worry about particular risks and the statistical likelihood that they
  will happen? ($\times$)
• What individual or country-level factors help explain the gap between people’s perceived likelihood of risk and
  the statistical likelihood?
• How do people’s previous experiences with being harmed by risks affect their risk perceptions?

World Risk Poll questions examined in this chapter

• Do you think that 10% is bigger than 1 out of 10, smaller than 1 out of 10, or the same as 1 out of 10? If you do not know, please just say so.
• How likely do you think it is that any of the following things could happen to you in the next two years? Please use a scale from 0 to 10, where 0 means it is ‘not likely at all’ and 10 means it is ‘very likely.’ You can use any number from 0 to 10.
  A. Being in a traffic accident
  B. Being physically attacked by someone
  C. Being in an aeroplane accident
  D. Drowning
  E. Being struck by lightning

• In general, how worried are you that each of the following things could cause you serious harm? Are you very worried, somewhat worried, or not worried?
  A. The food you eat
  B. The water you drink
  C. Violent crime
  D. Severe weather events, such as floods or violent storms
  E. Electrical power lines
  F. Household appliances, such as a washing machine, dryer, or refrigerator
  G. Mental health issues

• How likely do you think it is that each of the following things could cause you serious harm? Is it very likely, somewhat likely, or not likely at all?
  A. The food you eat
  B. The water you drink
  C. Violent crime
  D. Severe weather events, such as floods or violent storms
  E. Electrical power lines
  F. Household appliances, such as a washing machine, dryer, or refrigerator
  G. Mental health issues

• Have you, or someone you personally know, experienced serious harm from any of the following things in the past two years?
  A. Eating food
  B. Drinking water
  C. Violent crime
  D. Severe weather events, such as floods or violent storms
  E. Electrical power lines
  F. Household appliances, such as a washing machine, dryer, or refrigerator
  G. Mental health issues
Understanding percentages and proportions

Safety professionals and technical experts rely on data and analyses to calculate how likely events are to occur. They usually express the likelihood of these events in precise probabilities, ranging from 0% (no chance an event will occur) to 100% (an event is certain to occur).

In everyday life, however, people tend to use more subjective and imprecise language to express likelihood and probabilities. For example, an individual might assess the odds of their sport team winning as 'a good chance,' 'more likely than not' or 'highly doubtful'.

People often prefer this more casual language to express risk because it is easier to understand; probability is not a concept most people naturally grasp.

The World Risk Poll sought to gauge how challenging people find understanding percentages by asking: Do you think that 10% is bigger than 1 out of 10, smaller than 1 out of 10, or the same as 1 out of 10?

This question is important to the conversation about risk because existing research suggests that, in general, people with numeracy skills understand risks better and make better decisions related to health and safety.

However, a person does not need to be highly proficient in mathematics to be able to understand risks — a basic understanding of data and simple percentages enables people to make better decisions when they face risks.

The majority of people worldwide found understanding percentages somewhat challenging.

Worldwide, four in 10 people (40%) answered the question correctly, and fewer than 10% did not answer correctly. Those who had achieved higher levels of education were much more likely to give the correct response than those with lower levels of education. However, even among those with 16 or more years of education, 14% answered incorrectly, and 15% did not know.
Globally, slightly more men (43%) than women (37%) answered correctly. While women worldwide are less likely than men to attain higher education, Chart 3.1 shows that the small gender gap in numeracy skills persists across education levels.

**Chart 3.1**

**Numeracy skills, by gender and education level**

Percentage who answered 10% is the same as 1 out of 10

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Women (%)</th>
<th>Men (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8 years</td>
<td>23</td>
<td>28</td>
</tr>
<tr>
<td>9-15 years</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td>16+ years</td>
<td>69</td>
<td>72</td>
</tr>
</tbody>
</table>

Survey question: Do you think that 10% is bigger than 1 out of 10, smaller than 1 out of 10, or the same as 1 out of 10?
Additionally, Chart 3.2 shows that people in high-income economies were more likely to respond correctly, in line with higher average education levels in those countries. Regionally, at least two-thirds of people responded correctly in Australia/New Zealand (77%), Northern America (75%) and Northern/Western Europe (66%), while around one-quarter responded correctly in the Latin America/Caribbean region (27%), Southern Asia (21%) and in each region in sub-Saharan Africa (at/around 26%).

### Chart 3.2

**Numeracy skills, by region**

Percentage who responded ...  
- 10% is the same as 1 out of 10  
- 10% is bigger than 1 out of 10  
- 10% is smaller than 1 out of 10  
- Do not know/refused

<table>
<thead>
<tr>
<th>Region</th>
<th>10% is the same as 1 out of 10</th>
<th>10% is bigger than 1 out of 10</th>
<th>10% is smaller than 1 out of 10</th>
<th>Do not know/refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia &amp; New Zealand</td>
<td>77</td>
<td>32</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Northern America</td>
<td>75</td>
<td>53</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>66</td>
<td>57</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>63</td>
<td>71</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>Central Asia</td>
<td>57</td>
<td>9</td>
<td>8</td>
<td>26</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>56</td>
<td>10</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td>Middle East</td>
<td>50</td>
<td>10</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>50</td>
<td>6</td>
<td>7</td>
<td>37</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>45</td>
<td>11</td>
<td>8</td>
<td>37</td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>33</td>
<td>10</td>
<td>10</td>
<td>47</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>27</td>
<td>11</td>
<td>6</td>
<td>55</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>26</td>
<td>13</td>
<td>4</td>
<td>56</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>26</td>
<td>16</td>
<td>12</td>
<td>46</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>25</td>
<td>18</td>
<td>12</td>
<td>44</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>21</td>
<td>10</td>
<td>15</td>
<td>54</td>
</tr>
</tbody>
</table>

*Survey question: Do you think that 10% is bigger than 1 out of 10, smaller than 1 out of 10, or the same as 1 out of 10?*  
Due to rounding, percentages may sum to 100% +/- 1%.

Notably, this study finds that in all regions except Eastern and Southern Asia and Northern/Western and Southern Europe, more people said that 10% is bigger than 1 out of 10 than answered that it is smaller.
Safety and risk messages need to be designed for all people to understand, not just those with numeracy skills.

These results suggest numeracy must be considered when communicating about risk and safety. It may be more effective for safety campaigns to avoid using percentages too often in their messaging, as many people find them difficult to understand.

Public assessments of risk likelihoods versus statistical probabilities


As Chart 3.3 shows, the World Risk Poll found that people correctly estimated that traffic accidents, with an average global rating of 3.7 out of the possible 10. Being physically attacked was ranked as the second most likely risk, with an average rating of 2.5 out of 10; however, people ranked the likelihood of being struck by lightning slightly higher than drowning, with average ratings of 1.9 and 1.6, respectively. Being in an aeroplane accident was the least anticipated risk, with an average rating of 1.3.

### Chart 3.3

<table>
<thead>
<tr>
<th>Risk</th>
<th>% Not likely at all (rating of 0)</th>
<th>% Somewhat unlikely (1-4)</th>
<th>% About as likely as unlikely (5)</th>
<th>% Somewhat likely (6-9)</th>
<th>% Very likely (10)</th>
<th>Average rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic accident</td>
<td>27</td>
<td>26</td>
<td>17</td>
<td>15</td>
<td>8</td>
<td>3.7</td>
</tr>
<tr>
<td>Physically attacked</td>
<td>42</td>
<td>27</td>
<td>10</td>
<td>9</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>Struck by lightning</td>
<td>50</td>
<td>26</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>Drowning</td>
<td>56</td>
<td>23</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>Aeroplane accident</td>
<td>62</td>
<td>21</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Survey question: How likely do you think it is that any of the following things could happen to you in the next two years? Please use a scale from 0 to 10, where 0 means it is ‘not likely at all’ and 10 means it is ‘very likely.’

People tended to estimate the likelihood of experiencing relatively rare hazards — such as aeroplane accidents — higher than their statistical likelihood suggests.

Statistically, people are more likely to drown than be in an aeroplane accident or that drowning is the third-leading cause of unintentional injury-related fatalities worldwide, with an estimated 320,000 people dying each year. By contrast, the global rate of aeroplane accidents is 2.8 for every 1 million departures, suggesting that, for any "$1 \times 9$" (#(0/#, x!)) / #1 to zero.

People's tendency to rate the likelihood of being in an aeroplane accident as similar to, if slightly lower than, the likelihood of drowning may result from what researchers call the 'dread effect.' According to the psychometric paradigm of risk developed by Paul Slovic and such accidents almost certainly lead to death f) # "$#) -$. & ). $/$/1$4 to zero.

Aeroplane accidents have a relatively high media coverage. World Risk Poll was conducted in 2019, aeroplane manufacturer Boeing had recently two deadly and highly publicised aeroplane crashes in Ethiopia and Indonesia. Together, this may have led some people to estimate that aeroplane accidents are more likely to happen to them than the statistics show.

Numeracy skills may also play a role in people's tendency to over-estimate events with a low statistical likelihood. Worldwide, those who responded correctly that 1 in 10 is the same as 10% scored the likelihood that / #. 1 for every 1 million departures (n.d.). International Civil Aviation Organization. Retrieved August 4, 2020, from https://www.icao.int/safety/iStars/Pages/Accident-Statistics.aspx

Regional risk perceptions

Chart 3.4 demonstrates that people rated the world where they live. In all regions, being in a traffic accident received the highest likelihood score among the five risks studied. Being physically attacked received the second-highest score in every region except in Southern Asia, where being struck by lightning was seen as the second-most probable injury.

However, there was less consensus about the third-most common risk. In high-income regions such as Northern America, Northern/Western Europe, and Australia/New Zealand, being in an aeroplane accident was rated higher than drowning or being struck by lightning. Notably, people in higher-income regions are generally more likely to travel by aeroplane regularly than people in low-income regions. In many other regions, especially in Africa, lightning was rated as the third-most likely risk.

People in Southern Africa and Latin America/Caribbean assigned a higher likelihood to being physically attacked than being in a traffic accident. The likelihood estimates for all risks in Southern Africa and Latin America/Caribbean were consistently the highest or near the highest of all regions.

Conversely, likelihood estimates were comparatively low in Eastern Asia, where the average rating for drowning, being in an aeroplane accident and being struck by lightning was driven largely by China, where average likelihood scores were lower than the global averages and those of its Eastern Asian neighbours.

Southern Asia and Southeastern Asia tended to have likelihood estimates that were close to or below the global average. However, both regions registered higher-than-average scores for drowning risk. WHO data suggest that drowning is a more serious problem in these regions than elsewhere in the world, especially in Bangladesh, Cambodia and Laos. However, estimates of likelihood of harm from drowning were highest in Southern Africa with WHO data indicating that the region with the highest number of deaths caused by violent assaults. The likelihood estimates for all risks in Southern Africa and Latin America/Caribbean were consistently the highest or near the highest of all regions.


### Chart 3.4

Perceived likelihood of selected risks happening within the next two years, by region

Average score results

<table>
<thead>
<tr>
<th>Region</th>
<th>Traffic accident</th>
<th>Physically attacked</th>
<th>Struck by lightning</th>
<th>Drowning</th>
<th>Aeroplane accident</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3.7</td>
<td>2.5</td>
<td>1.9</td>
<td>1.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>4.3</td>
<td>3.2</td>
<td>2.8</td>
<td>2.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>2.9</td>
<td>2.7</td>
<td>1.7</td>
<td>1.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>4.4</td>
<td>2.9</td>
<td>2.2</td>
<td>2.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>5.2</td>
<td>5.2</td>
<td>3.8</td>
<td>2.8</td>
<td>2.3</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>5.2</td>
<td>4.9</td>
<td>2.7</td>
<td>2.5</td>
<td>1.6</td>
</tr>
<tr>
<td>Northern America</td>
<td>4.9</td>
<td>3.0</td>
<td>1.2</td>
<td>1.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Central Asia</td>
<td>3.3</td>
<td>1.6</td>
<td>1.5</td>
<td>1.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>2.2</td>
<td>1.2</td>
<td>0.8</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>3.7</td>
<td>2.4</td>
<td>2.0</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>3.8</td>
<td>2.2</td>
<td>2.9</td>
<td>1.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Middle East</td>
<td>4.6</td>
<td>2.7</td>
<td>2.2</td>
<td>1.9</td>
<td>1.6</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>4.3</td>
<td>3.0</td>
<td>2.1</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>4.5</td>
<td>3.5</td>
<td>1.1</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>5.1</td>
<td>4.1</td>
<td>2.0</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>4.8</td>
<td>2.9</td>
<td>0.8</td>
<td>1.2</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Survey question: How likely do you think it is that any of the following things could happen to you in the next two years? Please use a scale from 0 to 10, where 0 means it is ‘not likely at all’ and 10 means it is ‘very likely.’

\[
0/4* \quad = \quad "\text{Not likely at all}" \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad 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Perceived risk and previous experiences of harm

Existing research shows that perceived likelihood of harm, perceived severity of harm and previous experience of harm all shape how seriously people consider particular risks and how much they worry about them.

The World Risk Poll asked people three questions about each of seven sources of risk that could harm them: unsafe food, unsafe water, violent crime, severe weather events such as floods or violent storms, electrical power lines, household appliances (such as ovens) and mental health issues.

1. In general, how worried are you that [_________] could cause you serious harm? Are you very worried, somewhat worried, or not worried?

2. How likely do you think it is that [_________] could cause you serious harm in the next two years? Is it very likely, somewhat likely, or not likely at all?

3. Have you, or someone you personally know, experienced serious harm from [_________] in the past two years?

The analysis shows a strong relationship between previous experiences of harm and perceived likelihood estimation. For all risks, the percentage of people who said a risk is ‘very likely’ to cause them harm closely aligned with the percentage of people who said they had experienced serious harm from that risk in the past two years.

Previous experience of harm played an important role in shaping an individual’s overall worry levels, although its influence varied depending on the type of risk.


20 Several multivariate analyses of the data related to this question series (level of worry, perceived likelihood and past experience) found that the ‘perceived likelihood’ questions were redundant with the items about worry and experience. These questions provided no new information about why a person might be worried about a particular risk or hazard, given the strong overlap. As a result, this likelihood question is not discussed in the remainder of the analysis.
As Chart 3.5 demonstrates, severe weather events and violent crime generated the most worry worldwide, with about one in three people saying they were ‘very worried’ about each of these events (34% and 32%, respectively) said they were very worried about the water they drink.

-1% said they were very worried about the water they drink.

More than one in five people (21%) said they were very worried about the food they eat, and more than one in six (18%) said they were very worried about the water they drink.

-1% said they were very worried about the water they drink.

Perhaps surprisingly, one in five people (20%) said they were very worried that electrical powerlines could cause them serious harm, and almost one in 10 people (9%) said they were very worried household appliances (such as refrigerators and ovens) could harm them.

They were very worried that mental health issues could cause them serious harm in the

Chart 3.5

Percentage ‘very worried’ about versus ‘have experienced’ harm from various risks

<table>
<thead>
<tr>
<th>Risk</th>
<th>% Very worried</th>
<th>% Have experienced</th>
<th>Gap: % 'Very worried' minus % 'Experienced'</th>
</tr>
</thead>
<tbody>
<tr>
<td>The food you eat</td>
<td>21</td>
<td>17</td>
<td>+4</td>
</tr>
<tr>
<td>The water you drink</td>
<td>18</td>
<td>17</td>
<td>+1</td>
</tr>
<tr>
<td>Violent crime</td>
<td>22</td>
<td>20</td>
<td>+2</td>
</tr>
<tr>
<td>Severe weather events</td>
<td>32</td>
<td>34</td>
<td>-2</td>
</tr>
<tr>
<td>Electrical powerlines</td>
<td>34</td>
<td>22</td>
<td>+12</td>
</tr>
<tr>
<td>Household appliances</td>
<td>18</td>
<td>8</td>
<td>+10</td>
</tr>
<tr>
<td>Mental health issues</td>
<td>19</td>
<td>13</td>
<td>+6</td>
</tr>
</tbody>
</table>

Survey question: In general, how worried are you that [_________] could cause you serious harm? Are you very worried, somewhat worried, or not worried?

Have you or someone you personally know experienced serious harm from [_________] in the past two years?

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The gap between worry and experience was largest for violent crime and severe weather events. Risk perceptions are also known to be influenced by the 'known risk' effect—where a risk is observable and known to the individual and to science, with a good understanding of the consequences\(^\text{21}\). The violence and severe weather events appear large enough to lead to a much higher level of worry than past experience implies. Further, people often believe these risks are outside of their control, therefore generating higher worry levels\(^\text{22}\). This pattern suggests that while personal experience plays an important role in shaping an individual's overall worry levels, its influence depends on the type of risk. Notably, in regard to household appliances and mental health issues—two risks with a relatively low dread effect—the percentages who were 'very worried' and 'have experienced harm' were essentially the same. For these risks, past experience may contribute more to overall levels of worry.

Much of the literature on mental health suggests that experience plays a large role in people's attitudes toward mental illness\(^\text{24}\). The World Risk Poll shows that people who have experienced serious harm from mental health issues were more likely to be very worried from this source of risk. Similarly, people who appliances were also more likely to be very harmed from this source.

The analysis presented so far has shown that levels of worry about particular risks were 2, \# / 3\# / 4\# / 5\# / 6\# / 7\# of their control, therefore generating higher worry levels\(^\text{23}\). This pattern suggests that while personal experience plays an important role in shaping an individual's overall worry levels, they are not always the only factors.

The Worry Index and Experience of Harm Index

To further examine and give context to people's risk perceptions, the World Risk Poll has developed two composite indices— the Worry Index and the Experience of Harm Index. The Worry Index measures a person's overall level of worry. The index is based on how each individual answered the 'worry' question and is measured on a scale of 0 to 100, with a higher score indicating a greater degree of worry (see the Methodology report). Similarly, the Experience of Harm Index summarises the serious harm a person has experienced from all seven sources of risk. This index is also measured on a 0 to 100 scale, with a higher score indicating a person has experienced a greater level of harm from these risks over the past two years. At 40, the global Worry Index score is much higher than the Experience of Harm Index score of 16. This large gap between the two indices further suggests that personal these risks over the past two years.

\[^{25}\] In general, how worried are you that [_________] could cause you serious harm? Are you very worried, somewhat worried, or not worried?
Chart 3.6 shows that when comparing the results by region, Southern Africa and Latin America/Caribbean recorded the highest scores on the Worry Index at 58 and 52, respectively. However, Southern Africa also posted the highest Experience of Harm Index score (32), suggesting experience — especially in relation to violent crime — was one reason for the heightened level of concern in that region.

Survey question: In general, how worried are you that [_________] could cause you serious harm? Are you very worried, somewhat worried, or not worried?

Have you, or someone you personally know, experienced serious harm from [_________] in the past two years?
Chart 3.7 plots a country’s Experience of Harm Index score against the corresponding value for the Worry Index score. The average gap between the Worry and Experience Indices at the country level is about 23 points, though this varies considerably across countries.

In general, there is a strong, positive relationship between the two measures, as the linear trend line shows. Relative to that line, some countries can be considered ‘over-worriers,’ meaning that people worry more than their experience of harm alone warrants, leading to a relatively large gap. Other countries have relatively small gaps between the two indices. Top among this group was Sweden, which had the lowest score on the Worry Index of all countries (19). It scored 13 on the Experience of Harm Index, resulting in a gap of only six points.

The context for why people in certain countries may worry more or less is likely related to their vulnerability and other circumstances. The next section endeavours to better understand these differences by examining the individual characteristics that shape people’s perceptions.

Survey question: In general, how worried are you that [_________] could cause you serious harm? Are you very worried, somewhat worried, or not worried?

Have you, or someone you personally know, experienced serious harm from [_________] in the past two years?

Conversely, there are several countries with relatively small gaps between the two indices. Top among this group of countries was Sweden, which had the lowest score on the Worry Index. Other countries that fit this profile include Mongolia, Myanmar, Chile, Cyprus and South Korea.
Socioeconomic factors, education and risk perceptions

Different people perceive risk differently. The environment and culture people live in explain some of this difference, as do personal experiences. Yet, these factors can explain only part of an individual’s risk perceptions.

Much of the existing research on why people’s risk perceptions are different focuses on education or numeracy. The hypothesis behind this is that these differences arise from a lack of understanding of scientific information (or the ‘information deficit model’). However, more recent research suggests that perceptions of risk are informed not only by education, but also by much broader issues — often related to personal circumstances and how well represented a person feels in their society.

Individual differences may best explain risk-perception gaps.

Following variables: gender, urban/rural residence, education, numeracy, feelings about household income, income group and overall life satisfaction.

More details about these statistical analyses are located in the Methodology report.


27 Ibid.

28 ‘Overall life satisfaction’ measure was derived from a Gallup World Poll question that asks people to rate their satisfaction with their lives on a scale of 0 to 10, with 10 being the best possible life.
The Lloyd's Register Foundation World Risk Poll Report 2019

Key findings from these analyses include:

1 Gender: Consistent with past research, men and women perceived risk differently, even after accounting for other factors such as socioeconomic status. In particular, women scored higher on the Worry Index (43 versus 38). However, the differences between men and women were negligible on the Experience of Harm Index (men scored 17, compared to women at 16). This finding suggests that women worry more than men even when they have similar experiences of harm with risks. Notably, the gender gap in Worry Index scores was highest in Northern America (women, 39 versus men, 29), Australia/New Zealand (women, 34 versus men, 24), Southern Europe (women, 48 versus men, 40), Southern Africa (women, 62 versus men, 53) and Latin America/Caribbean (women, 55 versus men, 48).

2 Feelings about household income: Worry Index scores rose in tandem with feelings of financial insecurity. People who felt they lived comfortably on their present household income scored lower on the Worry Index (35) than those finding it very difficult to get by (47). This finding is in line with existing literature on the subject that suggests that people who struggle financially are likely to worry more about other risks as well, compared with people who are more financially secure.

3 Education: Though the relationship between education and a person’s level of worry was statistically significant, even after accounting for other personal factors, it was not a particularly strong relationship.

Chapter 4:
Influencing understanding of risk

In February 2020, the WHO reported that, in addition to dealing with the outbreak of COVID-19, it was also fighting an infodemic — ‘an overabundance of information, some accurate and some not, that makes it hard for people to find trustworthy sources and reliable guidance when they need it’. People worldwide were receiving competing messages from many ‘expert’ or ‘official’ sources. Some of this mixed messaging stemmed from the fact that the virus was new; the global medical and scientific communities were learning about the disease almost simultaneously with the public. Politicians also often contradicted scientific advice with public statements that downplayed the risks.

To further aggravate and confuse the situation, people were receiving competing messages from many ‘expert’ or ‘official’ sources. Some of this mixed messaging stemmed from the fact that the virus was new; the global medical and scientific communities were learning about the disease almost simultaneously with the public. Politicians also often contradicted scientific advice with public statements that downplayed the risks.

When people need to make decisions about their safety, the sources of information they use and trust are vital. However, competing narratives have a damaging impact — people can become confused or disengaged and not take action to avoid being harmed or harming others. Information people turn to and trust most to help keep them safe from foodborne illnesses that harm or kill millions each year.

While the World Risk Poll was conducted themes people and policymakers have dealt with during the pandemic. The data provide important insights into attitudes toward rules and regulations designed to mitigate risk and keep people safe.

Adherence to seat belt laws and whether people think the government should require businesses to adopt safety rules.

2 Ibid.
Key findings

1. People trusted their family and friends and medical professionals most for food safety information. Official government sources were not among the most trusted sources of food safety information for most people.

2. Half of people in low-income economies sought food safety information from celebrities or religious leaders. People in low-income economies, which are disproportionately affected by foodborne illnesses, were more likely to seek food safety information from famous people and religious leaders than government agencies.

3. Social trust, trust in national institutions and numeracy skills matter. People who did not have confidence in their government or other people in their community, and those who found numeracy relatively challenging, were less likely to trust official sources of information on food safety.

4. Most people worldwide reported wearing seat belts; seat belt laws made use more likely. More than three in four people worldwide (77%) reported wearing seat belts. In countries where seat belt use is required by law, compliance levels were much higher than in countries where it is not.

5. Governments should make businesses follow safety rules. Nearly nine in 10 people worldwide said governments should require businesses to adopt safety procedures, suggesting there is support for regulations that would reduce risk and improve safety, especially in the workplace.

Insight into action

Risk communication is vital to ensuring safety in everyday life as well as in crisis conditions such as natural disasters or an infectious disease outbreak. If policymakers want to enhance safety and improve their risk mitigation measures, they need to know what sources of safety information people use and which sources people trust.

World Risk Poll results suggest that risk communication should be nuanced and tailored to gain the attention of different sections of the population. The fact that only half of people worldwide would consider consulting official government sources for food safety information indicates that safety authorities may need to work with groups people trust more and use alternative messaging routes to religious leaders and medical professionals for food safety information. Policymakers may consider working with these groups to empower local communities with risk and safety information.

Most people worldwide reported wearing seat belts; seat belt laws made use more likely. More than three in four people worldwide (77%) reported wearing seat belts. In countries where seat belt use is required by law, compliance levels were much higher than in countries where it is not.

Governments should make businesses follow safety rules. Nearly nine in 10 people worldwide said governments should require businesses to adopt safety procedures, suggesting there is support for regulations that would reduce risk and improve safety, especially in the workplace.
Finally, risk communication should include details about decisions, policies and regulations that are designed to keep people safe. This information plays a vital role in achieving trust, and many studies show that a society’s attitudes toward regulation can predict people’s attitudes toward risk. The information provides scope for further research to explore the impact of regulation on safety, especially outside the sphere of the workplace.

Main research questions and topics

• What sources do people use to obtain information about safety and which sources do they trust most?

World Risk Poll questions examined in this chapter

• Suppose you want to find out if the food you eat is safe. Would you look to any of the following sources for information, or not?

A. Friends or family
B. Medical professionals, such as your local doctor or nurse
C. Newspapers, television or radio
D. The internet/social media
E. Government agency responsible for food safety
F. The packaging or label on the food
G. A famous person you like
H. Local religious leaders

• Considering the sources of information you would access, which one would you trust most?

• In general, do you think the government should require businesses to adopt safety procedures and rules, or not?

Sources of food safety information

The WHO estimates that nearly 600 million people become sick, and more than 420,000 die from eating contaminated food each year. However, this burden from foodborne diseases is not spread equally across the world and is highly related to a country’s economic development level.

People in low- and middle-income countries and the World Bank, such countries in Southern Asia, Southeastern Asia and sub-Saharan Africa account for 41% of the world’s population, yet bear 53% of all foodborne illness and 75% of related deaths.

In addition to the human toll, the World Bank estimates that low- and middle-income countries lose approximately $110 billion each year in productivity, trade and medical costs related to the treatment of foodborne illnesses.

Given the human impact and cost of this problem, people need access to information they can trust about food safety. Therefore, the World Risk Poll asked people which sources of food safety information they would consider using, and which ones they would trust the most.

Globally, people were more likely to look to their friends and family and medical professionals for food safety information than to their country’s food safety authority.

At the global level, most adults would about the safety of their food. Notably, the government agencies responsible for food safety did not top the list of sources people would consider. Far ahead of them were family and friends (73%), packaging or food labels (69%) and medical professionals (68%), with more than two in three adults worldwide saying they would seek information from these sources.

Rather, government agencies were among the second-tier sources. At least half of people worldwide said they would look to newspapers, television or radio (56%), the internet or social media (51%) to learn about the safety of their food. Additionally, roughly one in three people said they would seek information from famous people (34%), and one in four would consult religious leaders (26%).

Sources of food safety information by demographic and income groups

Men and women worldwide largely answered questions regarding sources for food safety information in the same way. There were also younger people and people with higher levels of education to seek information from the internet and social media.

As shown in Chart 4.1, people in upper-middle-income and high-income economies were more likely to seek out information from sources such as food labels than people in lower-income economies. In general, food labelling regulations are more strict in high-income economies, but it is also likely that literacy and education levels play a role in how people perceive and use food labelling as a source of food safety information.

People in upper-middle-income and high-income economies were also more likely than those in lower-income economies to seek information from the food safety authorities. However, even in high-income countries, food safety authorities were not considered top sources of information.

Survey question: Suppose you wanted to find out if the food you eat is safe. Would you look to any of the following sources for information, or not?

Half of people in low-income economies sought food safety information from celebrities or religious leaders.

In low-income economies, government food safety agencies were the second least likely source to be consulted for information about food safety. People in these countries and territories were far more likely to look to famous people (55%) or local religious leaders (50%) for food safety information.

**Religious leaders as sources of information for safety**

According to Gallup World Poll data, religion is an important part of most people’s daily lives in many low-income economies. People in low-income countries and territories may look to religious leaders for food safety information. As shown in Chart 4.2, people in Northern Africa, Central Asia and Eastern Europe were the least likely to seek food safety information from government agencies. People in these regions were more likely to look to famous people or local religious leaders for food safety information. More than four in 10 people would do the same in Southern Asia (44%) and Southeastern Asia (42%).

By contrast, people in Northern America were the most likely to look to official government agencies for food safety information. Agencies in these regions have the highest foodborne illness burden.

These insights suggest that policymakers should consider engaging with trusted community leaders for assistance.

---

12 For example, on average in Eastern Africa, 96% of people said religion is an important part of their daily lives.

13 On average across the European Union, 40% of people said religion is an important part of their daily lives.

### Chart 4.2

Percentage who would look to a particular source for food safety information, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Family and friends</th>
<th>Food labels</th>
<th>Medical professionals</th>
<th>Newspapers, television or radio</th>
<th>Food safety authority</th>
<th>Internet/social media</th>
<th>A famous person</th>
<th>A local religious leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Africa</td>
<td>69</td>
<td>60</td>
<td>72</td>
<td>59</td>
<td>49</td>
<td>39</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>67</td>
<td>61</td>
<td>76</td>
<td>48</td>
<td>63</td>
<td>36</td>
<td>53</td>
<td>43</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>68</td>
<td>61</td>
<td>38</td>
<td>41</td>
<td>18</td>
<td>38</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>74</td>
<td>83</td>
<td>85</td>
<td>77</td>
<td>61</td>
<td>69</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>74</td>
<td>76</td>
<td>85</td>
<td>54</td>
<td>58</td>
<td>68</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>Northern America</td>
<td>65</td>
<td>81</td>
<td>80</td>
<td>47</td>
<td>75</td>
<td>60</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Central Asia</td>
<td>72</td>
<td>73</td>
<td>52</td>
<td>24</td>
<td>29</td>
<td>37</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>78</td>
<td>77</td>
<td>70</td>
<td>73</td>
<td>61</td>
<td>61</td>
<td>31</td>
<td>13</td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>75</td>
<td>77</td>
<td>66</td>
<td>66</td>
<td>54</td>
<td>60</td>
<td>42</td>
<td>43</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>74</td>
<td>51</td>
<td>63</td>
<td>50</td>
<td>41</td>
<td>54</td>
<td>44</td>
<td>24</td>
</tr>
<tr>
<td>Middle East</td>
<td>75</td>
<td>73</td>
<td>65</td>
<td>42</td>
<td>40</td>
<td>55</td>
<td>32</td>
<td>35</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>62</td>
<td>70</td>
<td>43</td>
<td>30</td>
<td>30</td>
<td>49</td>
<td>23</td>
<td>9</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>66</td>
<td>72</td>
<td>68</td>
<td>47</td>
<td>59</td>
<td>59</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>66</td>
<td>84</td>
<td>75</td>
<td>39</td>
<td>66</td>
<td>51</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>65</td>
<td>82</td>
<td>70</td>
<td>44</td>
<td>75</td>
<td>65</td>
<td>10</td>
<td>8</td>
</tr>
</tbody>
</table>

Survey question: Suppose you wanted to find out if the food you eat is safe. Would you look to any of the following sources for information, or not?
Most trusted sources for food safety information

In addition to understanding what sources people turn to most for food safety information, policymakers seeking to determine the most effective ways to communicate safety messages to specific populations also need to understand the sources people trust the most if they are to reach their audiences.

Family and friends and medical professionals were generally the most trusted sources for food safety information and should be considered in any food safety communications effort.

As shown in Chart 4.3, more than three in 10 people worldwide said they would most trust food safety information from their families and friends. More than one in five (22%) would trust medical professionals most, and just under one in six (15%) said they would most trust the government agency responsible for food safety in their country. Relatively few — only 1% each — said they would most trust a famous person or religious leader.

**Chart 4.3**

Percentage who would trust a particular source for food safety information, global results

Survey question: Considering the sources of information you would access, which one would you trust MOST to provide information about food safety?
The source people trusted most varied depending on their level of education (see Chart 4.4). People with zero to eight years of education were notably more likely than those with higher levels of education to say they trusted family and friends the most. Interestingly, women accounted for most of these differences. People with the highest levels of education were more likely to say they trusted food safety authorities the most.

**Chart 4.4**

**Top three most-trusted sources for food safety information, by gender and education level**

Results among adults who answered ‘yes’ they would use a source of information

Survey question: Considering the sources of information you would access, which one would you trust MOST to provide information about food safety?
Social trust drives trust in government as a source of safety information

Social trust can be a difficult concept to measure across different cultures and countries. To explore this issue, the World Risk Poll used three well-accepted international measures to gauge social trust.

In a series of questions, the World Risk Poll asked people to imagine a scenario where they lost a small bag of financial value and to judge how likely it would be for different people—a neighbour, a stranger, or the police—to return that bag.

Worldwide, people were most confident that the police would return their lost possession, with almost half (49%) indicating it was ‘very likely’ this would happen. Slightly fewer than four in 10 people (38%) believed their neighbour would be likely to return the lost bag, but fewer than one in 10 (7%) were certain a stranger would be ‘very likely’ to do so.

These general patterns were largely the same regardless of country income group. However, those living in high-income economies were far more trusting of the police (68%) and of their neighbours (57%) than those living in a lower-income economies.

To get a better sense of the overall level of interpersonal and institutional trust in a country, we analysed an individual’s average response across the three questions. People who answered ‘very likely’ were given a score of 3, while ‘somewhat likely’ received a score of 2 and ‘not likely at all’ a score of 1. Consequently, average scores close to 3 indicated a person had high social trust, while a score closer to 1 indicated the opposite.


Chart 4.5 examines the relationship between this social trust measure and trust in government food safety authorities. Findings from the World Risk Poll indicate that countries with high social trust were more likely to have high trust in the government food safety authority and more confidence in their government’s safety performance.

**Survey question:** Considering the sources of information you would access, which one would you trust MOST to provide information about food safety?

**Suppose you lost a small bag that contained items of great financial value to you that had your name and address written on it. If it were found by each of the following people, in general, how likely is it that it would be returned to you with all its contents?**

---

17 Overall correlation of national-level results — average ‘social trust’ score (the average of the three questions about losing a small bag of great financial value) and the percentage of people who said they trust the government (food safety authority) for information about whether their food is safe — is 0.529 among 139 countries.
Numeracy, confidence in national institutions and trust in official sources of food safety information

trust in sources of information on food safety against a survey question that measured their numeracy*, institutions as measured by Gallup's National Institutions Index**. Accounting for a country's income level, people who scored highly on the numeracy question were more likely to trust 'expert' or 'official' sources such as medical professionals and the government agency responsible for food safety in their country's institutions was also strongly related to their trust in sources of information for food safety, particularly in high-income countries.

This analysis indicates that people in societies with lower levels of trust in national institutions or with lower numeracy levels were less likely to trust official sources of information on food safety.

*Previously explored in Chapter 3, this World Risk Poll survey question asked: Do you think that 10% is bigger than 1 out of 10, smaller than 1 out of 10, or the same as 1 out of 10? If you do not know, please just say so.

**The National Institutions Index reflects people's confidence in four key institutions prominent in a country's leadership: the military, the judicial system, the national government and the honesty of elections.

Regulations and safety

...
Most people worldwide reported wearing seat belts; seat belt laws made use more likely.

As shown in Chart 4.6, globally, more than three in four people (77%) reported wearing a seat belt when in a motorised vehicle when one was available. However, even with prevalent seat belt laws around the world, one in five people (20%) said they do not typically wear a seat belt when they are in a motorised vehicle. People in low-income economies were the least likely to say they wear seat belts. Notably, 93% of the world’s road fatalities occur in low- and middle-income economies. In contrast, reported seat belt use was nearly universal in high-income economies.

**Chart 4.6**

Seat belt use, by country income group

<table>
<thead>
<tr>
<th>% Who wear a seatbelt when available</th>
<th>% Of countries with seatbelt law</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>77</td>
</tr>
<tr>
<td>Low income</td>
<td>45</td>
</tr>
<tr>
<td>Lower-middle income</td>
<td>59</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>90</td>
</tr>
<tr>
<td>High income</td>
<td>96</td>
</tr>
</tbody>
</table>

Survey question: In general, do you wear a seat belt if you are in a motorized vehicle and one is available?

24 Note: The question does not specify whether seat belt use is in the front or back of the vehicle.
In addition to being more prevalent in high-income economies, seat belt use increased with education levels. Seventy percent of people with zero to eight years of education reported wearing seat belts, while seat belt use was more universal among those with 16 or more years of education, at 92%. (See Chart 4.7.)

**Chart 4.7**

Seat belt use, country income group-level results by gender and education level
Percentage who wear a seat belt when available

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
<th>0-8 years education</th>
<th>9-15 years education</th>
<th>16+ years education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>41</td>
<td>50</td>
<td>42</td>
<td>55</td>
<td>52</td>
</tr>
<tr>
<td>Lower-middle income</td>
<td>53</td>
<td>64</td>
<td>53</td>
<td>64</td>
<td>72</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>90</td>
<td>91</td>
<td>90</td>
<td>89</td>
<td>94</td>
</tr>
<tr>
<td>High income</td>
<td>96</td>
<td>96</td>
<td>93</td>
<td>96</td>
<td>98</td>
</tr>
</tbody>
</table>

Survey question: In general, do you wear a seat belt if you are in a motorized vehicle and one is available?
The role of government in managing risk

both at the individual and collective levels,

important role by formulating laws, regulations or other policies to reduce various types of risk26.

Globally, people largely supported government safety regulations in the workplace.

people around the world (85%) said governments should require businesses to adopt safety procedures and rules. Strong majorities in every region, including as many as 95% in Southern Europe, favoured such actions. The lowest level of agreement was still high, at 76%, in Southern Asia. This percentage was largely driven by attitudes in India, where 74% said they support the government requiring businesses to adopt safety rules.

Chapter 5: Risk at work

The International Labour Organization (ILO) estimates that nearly 3 million people die from occupational accidents and work-related diseases every year. Additionally, about 374 million people suffer non-fatal, work-related injuries that result in at least four days of absence from work. In addition to the human cost, the resulting losses in compensation, lost workdays, re-training and health expenditures cost the world between 2% and 6% of its GDP every year. However, the real numbers could be even higher. In much of the developing world, where these deaths and accidents are most likely to occur, governments do not keep good records, if at all. Underreporting is common even in countries and territories that collect occupational safety data, and countries collect and report data in ways that keep good records, if at all.

The World Risk Poll helps fill this data gap. One of Lloyd’s Register Foundation’s goals is to establish a base of global safety evidence that will help people make better decisions about the safety of their lives and property. Addressing the quality, comparability and availability of occupational safety data is an important step toward that goal.


These data represent accounts from workers in multiple sectors and professions, such as farmers and fishers (23%), small-scale traders (15%), and managers and executives (4%) (see Chart 5.1). These figures provide a valuable proxy for workplace safety data that are missing or unreliable in many countries.

### Chart 5.1

**Percentage of workers by sector or role in the World Risk Poll**

<table>
<thead>
<tr>
<th>Sector or Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hired manager/executive/official in a business or the government</td>
<td>23%</td>
</tr>
<tr>
<td>Construction/manufacturing/production worker</td>
<td>15%</td>
</tr>
<tr>
<td>Professional</td>
<td>13%</td>
</tr>
<tr>
<td>Clerical/other office worker/sales worker</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>9%</td>
</tr>
<tr>
<td>Vendor/small scale trader/self-employed without hired workers/street hawker/informal worker</td>
<td>9%</td>
</tr>
<tr>
<td>Farmer/farmworker/fisher</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
</tr>
<tr>
<td>Do not know</td>
<td>1%</td>
</tr>
<tr>
<td>Refused</td>
<td>1%</td>
</tr>
</tbody>
</table>

Survey question: What is your primary occupation/job title?

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Key findings

1. Hundreds of millions of workers have been seriously injured while working. Nineteen percent of workers worldwide — which translates into about 600 million people — said they have been seriously injured at some point while working.

2. Farming and construction were among the most dangerous job sectors. Globally, 27% of workers who identified as farmers, farmworkers, fishers or agricultural labourers said they had been seriously injured while working. The next highest reported injury rate, 22%, was among those who said they worked in construction, manufacturing or production.

3. Risks varied by region; so should safety interventions. For example, much of Africa, Asia and the Middle East could focus on regulation of fire safety measures at work, while increased regulation of exposure to chemicals and physical violence and harassment could be more beneficial in Northern America, Europe and Australia/New Zealand.

4. Workers in Northern/Western Europe and Australia/New Zealand were most likely to name physical violence and harassment as a top risk to their safety at work. At least one in four workers in each region said physical violence and harassment were risks to their personal safety. This perception was highest in France, where 32% of workers identified it as a source of major risk.

5. More working men than working women reported having been injured at work. However, the gender gap narrowed when men and women were asked about their experiences with specific types of hazards over the past two years, such as fire, exposure to chemicals or biological substances, physical attacks or violence.

6. Occupational safety should protect mental, as well as physical, health. Workers who said they had experienced a serious injury while working were nearly twice as likely as those who have not been injured to say they have experienced mental health issues (32% versus 18%, respectively). In particular, workers who experienced physical violence and harassment were the most likely to say they had experienced mental health issues.

7. A majority of workers felt free to report safety issues without fear. Globally, more than eight in 10 of those who worked for an employer said they felt they could report safety issues without fear of punishment.

8. Most workers embraced safety rules at their workplace as a ‘good thing.’ Workers who thought safety rules made their job more difficult were about twice as likely to be injured at work than those who saw safety rules as a ‘good thing’ (32% versus 15%, respectively).

9. Education level influenced safety at work. Despite being more vulnerable to workplace injuries, workers with lower levels of education were less likely to say safety rules at work were ‘a good thing.’ While 89% of workers globally with 16 or more years of education thought safety rules were a good thing, this percentage fell to 72% for those with zero to eight years of education.

10. Workers in rural areas were least likely to feel comfortable reporting safety problems. Countries with larger rural populations had the lowest percentages of workers who felt they could report safety problems to employers without fear of punishment. Workers in the primary sector — especially farming and fishing — were least likely to say they would feel comfortable reporting safety problems.
Insight into action

The World Risk Poll data on self-reported injuries at work provide valuable signals for policymakers and organisations tasked with improving occupational safety. The worldwide, particularly in countries and territories where little or no data have previously been collected, offer an unprecedented first look at risks and threats to safety that workers face. The results confirm which sectors have the highest self-reported injury rates and which demographic groups are most affected in each country. This knowledge enables policymakers and safety professionals to formulate more evidence-informed policies and interventions.

The analysis suggests that the most economically vulnerable groups were also likely to be at risk due to unsafe working conditions. Policy interventions — especially targeted, safety-related regulatory measures — to protect those workers are particularly important, given they are the least likely to speak out to report unsafe practices and conditions without fear of punishment.

Main research questions and topics

• How many workers worldwide report that they have been seriously injured at work? How do these numbers compare with official injury statistics, where available?
• What are the biggest sources of risk to workers' safety at work?
• Do workers feel they can report safety issues without fear of being punished?
• Who do workers feel is mostly responsible for their safety at work?
• Do workers see safety rules and regulations at work as a good thing, or not?
World Risk Poll questions examined in this chapter

- Have you ever been seriously injured while working?
- How likely do you think it is that you could be injured while working in the next two years?
- Are any of the following a source of risk to your personal safety while you are working?
  A. Operating equipment or heavy machinery
  B. Fire
  C. Physical harassment or violence
  D. Physical harassment or violence
  E. Tripping or falling
- Have you or has anyone you work with experienced injury or harm from any of the following while working in the past two years?
  A. Operating equipment or heavy machinery
  B. Fire
  C. Physical harassment or violence
  D. Physical harassment or violence
  E. Tripping or falling
- Do you agree or disagree with the following statement? You are free to report any safety problems you notice to your employer without fear of punishment.
- Other than yourself, who do you feel is most responsible for your safety while you are working?
- Do you think each of the following care about your safety while you are working, yes or no? If the person or group does not apply to you, please say so.
  A. Your coworkers
  B. Your boss or supervisor
  C. The trade or labour union
- Do you think the safety rules at your place of work are a good thing to have or do they make your job more difficult to do?
Injuries at work

Globally, about one in five workers (19%) — which translates into nearly 600 million people — said they have been seriously injured at some point while they were working. These workers live disproportionately in Africa and Asia and in low- and lower-middle-income economies, where not only work is dangerous but health and safety regulations are notoriously weak\(^4\).

Hundreds of millions of workers have been seriously injured while working.

Notably, low-income and lower-middle-income regions tend to track few statistics on occupational injuries\(^5\). However, workers in low-income countries (31%) were more than twice as likely as those in high-income countries (15%) to say they have been seriously injured at some point while working.

**Chart 5.2**

<table>
<thead>
<tr>
<th>Top 3</th>
<th>Bottom 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sierra Leone 69%</td>
<td>Italy 7%</td>
</tr>
<tr>
<td>The Gambia 64%</td>
<td>Singapore 5%</td>
</tr>
<tr>
<td>Malawi 62%</td>
<td>Poland 4%</td>
</tr>
</tbody>
</table>

Survey question: Have you ever been seriously injured while working?


At least half of workers in some countries have been seriously injured at work

More than 50% of workers in seven countries (as shown in Table 5.1) said they have been seriously injured at work at some point. These countries are all in Central/Western Africa, Eastern Africa and Southern Asia, where agriculture is the largest employment sector. For example, workers in Sierra Leone were the most likely in the world to say they have been injured at work (69%), and more than 57% of the country’s GDP comes from agriculture.

Table 5.1  
Countries where more than 50% of workers said they have been seriously injured while working

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage of workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sierra Leone</td>
<td>69</td>
</tr>
<tr>
<td>The Gambia</td>
<td>64</td>
</tr>
<tr>
<td>Malawi</td>
<td>62</td>
</tr>
<tr>
<td>Myanmar</td>
<td>58</td>
</tr>
<tr>
<td>Liberia</td>
<td>55</td>
</tr>
<tr>
<td>Uganda</td>
<td>52</td>
</tr>
<tr>
<td>Zambia</td>
<td>51</td>
</tr>
</tbody>
</table>

Survey question: Have you ever been seriously injured while working?

Like Sierra Leone, many of these countries lack the institutional capacity and resources to collect data on occupational injuries and conduct regular safety inspections.

In the same year the World Risk Poll was conducted (2019), Myanmar enacted a new occupational safety and health law, which will introduce safety standards that align with established international and regional protocols. Given these changes, it would be valuable to track this country’s occupational injury trends in future waves of the World Risk Poll.

Injuries by sector and occupation

Worldwide, workers in occupations that require manual labour or services were the most likely to say they have ever been seriously injured while working. It is important to note that, because the World Risk Poll asks workers if they have ever been seriously injured while working, it is possible that the job they work in now was not the job at which they were injured.

**Serious injuries were most commonly reported in agricultural jobs, followed by construction and manufacturing.**

According to the ILO, the global agricultural sector employs more than a billion workers, and those workers run twice the risk of dying on the job as workers in other sectors\(^\text{10}\). Therefore, it is not surprising that workers were the most likely to say they had been seriously injured while working. More than one in four workers (27%) employed in this sector said they had been injured at some point at work (see Chart 5.3).


<table>
<thead>
<tr>
<th>Profession</th>
<th>Percentage of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural worker</td>
<td>27%</td>
</tr>
<tr>
<td>Construction/Manufacturing</td>
<td>22%</td>
</tr>
<tr>
<td>Business owner</td>
<td>22%</td>
</tr>
<tr>
<td>Vendor/trader</td>
<td>20%</td>
</tr>
<tr>
<td>Hired worker</td>
<td>19%</td>
</tr>
<tr>
<td>Manager/official</td>
<td>12%</td>
</tr>
<tr>
<td>Professional</td>
<td>12%</td>
</tr>
<tr>
<td>Vendor/trader</td>
<td>7%</td>
</tr>
</tbody>
</table>

Survey question: Have you ever been seriously injured while working?

---

**Chart 5.3**

Percentage of workers who have ever been seriously injured while working, by profession
As illustrated in Chart 5.4, workers in several regions who were employed in construction/manufacturing or production were generally more likely than agricultural labourers to report they have been injured while working at some point in their lives.

**Chart 5.4**

Self-reported injuries in construction/manufacturing/production versus agriculture, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Construction/Manufacturing/Production</th>
<th>Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Europe</td>
<td>11%</td>
<td>20%</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>15%</td>
<td>21%</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>13%</td>
<td>19%</td>
</tr>
<tr>
<td>Middle East</td>
<td>23%</td>
<td>19%</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>28%</td>
<td>35%</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>34%</td>
<td>40%</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>29%</td>
<td>38%</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>30%</td>
<td>37%</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>38%</td>
<td>40%</td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>35%</td>
<td>38%</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>Central Asia</td>
<td>23%</td>
<td>20%</td>
</tr>
<tr>
<td>Northern America</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Survey question: Have you ever been seriously injured while working?
The Lloyd's Register Foundation World Risk Poll Report 2019

comprising 'mining and quarrying, manufacturing, construction and public utilities (electricity, gas and water') accounted for most work-related deaths in Central Asia and Eastern Europe, while agriculture accounted for most workplace deaths across Africa12. While those data long pre-date the World Risk Poll, the survey results affirm that jobs in construction/manufacturing and production remain some of the most dangerous professions in Central Asia and Eastern Europe.

Demographics of workers who were most likely to report workplace injuries

workplace injuries on a more granular level, the World Risk Poll asked people what their primary occupation or job title was and also asked workers whether they have ever been injured at work. The analysis of these two World Risk Poll questions shows a gap between the number of working women who reported having been injured at work and the number of working men who reported the same, even within the same job categories.

Worldwide, more working men (23%) than working women (14%) said they have been seriously injured while working. These results reinforce injury and fatality statistics by industry that suggest women experience fewer injuries at work than men13. ILO studies similarly have found that men may take fewer precautions at work while women tend to adopt more preventive and protective ways of carrying out work14.

<table>
<thead>
<tr>
<th>Chart 5.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of workers who have been seriously injured while working, by gender and profession</td>
</tr>
</tbody>
</table>

Survey question: Have you ever been seriously injured while working? What is your primary occupation/job title?


Regionally, the only notable outlier was Southern Asia, where similar percentages of working men (29%) and women (27%) reported that they have been seriously injured while working. This finding seems to largely reflect the equal percentages of men (32%) and women (32%) who work in the region’s large agricultural sector.

Working men said they have been seriously injured while working, and 27% of women said they have. These figures mirror gender patterns in the ILO’s official statistics on non-fatal occupational injuries for women and men in the country15.

Workers with lower levels of education were more likely to report being injured at work.

As Chart 5.6 shows, the results for male and female workers followed the same general patterns by education, with injuries becoming less likely as education levels rose. However, far fewer women than men at each level of education said they have been injured at work.

<table>
<thead>
<tr>
<th>Chart 5.6</th>
</tr>
</thead>
</table>

Percentage of workers who have been seriously injured while working, by gender and education level

<table>
<thead>
<tr>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>+c* 4 - 0($)</td>
<td>19</td>
</tr>
<tr>
<td>+c# 4 - 0($)</td>
<td>10</td>
</tr>
<tr>
<td>#0 - 0($)</td>
<td>3</td>
</tr>
</tbody>
</table>

Survey question: Have you ever been seriously injured while working?


Perceived risks in the workplace

While the previous section provided estimates of how many workers have ever been injured at work, this section focuses on the types of risks people said they faced while working. The ILO and several falls are among the most common causes of work injuries (Slips and trips | Data. (n.d.). International Labour Organization. Retrieved May 12, 2020, from https://www.ilo.org/global/topics/labour-administration-inspection/resources-library/publications/guide-for-labour-inspectors/slips-and-trips/lang--en/index.htm)

Globally, however, trips and falls were not the only risk weighing on workers’ minds when they entered their workplaces. Asked about specific sources of risk to their safety while working, one in four workers (25%) cited fire, followed closely by operating equipment or heavy machinery (23%) and exposure to chemicals or biological substances (21%). About one in six workers (17%) named physical harassment or violence.

Apart from trips and falls, the World Risk Poll finds that workers living in low-income economies reported facing more types of risk than those in other country income groups. Seventy-four percent of workers in low-income economies said they faced at least one of the five sources of risks mentioned, compared with 58% of workers elsewhere.

Globally, tripping or falling at work was the most common perceived risk for workers in every region.

Fire was also the second most-mentioned risk in the Middle East and throughout most of Asia, potentially reflecting the number of high-profile workplace fires in those regions over the past decade. For example, in Bangladesh — where numerous workplace fires, such as the Rana Plaza fire in 2013, have killed and injured thousands over the years — 50% of workers identified fire as a risk.

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Survey question: Are any of the following a source of risk to your personal safety while you are working?

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The Lloyd's Register Foundation World Risk Poll Report 2019

Risks varied by region; so should safety interventions.

The variety of top-reported risks across regions indicates that hazard-specific, targeted interventions in different countries and regions could significantly improve safety and reduce risk. For example, much of Africa, Asia and the Middle East could focus on regulation of fire safety measures at work, while increased regulation of exposure to chemicals and physical violence and harassment could be more beneficial in Northern America, Europe and Australia/New Zealand.

Physical violence and harassment: A top risk in parts of Europe, Australia & New Zealand

Northern/Western Europe (23%) and Australia/New Zealand (28%) warrant closer focus among their primary sources of risk. As shown in Chart 5.8, in Northern/Western Europe, mentions of physical violence and harassment were highest in France, where one in three workers (32%) identified this as a source of risk. Men and women perceived this risk differently, with 38% of women in France naming this as a risk, compared with 28% of men in France. In other countries, such as Finland, Sweden, Denmark and Norway, this gender gap was much larger, with women, in all cases, being more likely to say they face this risk at work.

As shown in Chart 5.8, in Northern/Western Europe, mentions of physical violence and harassment were highest in France, where one in three workers (32%) identified this as a source of risk. Men and women perceived this risk differently, with 38% of women in France naming this as a risk, compared with 28% of men in France. In other countries, such as Finland, Sweden, Denmark and Norway, this gender gap was much larger, with women, in all cases, being more likely to say they face this risk at work.

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### Chart 5.8

**Percentage who named workplace violence/harassment as a risk, by gender**

Results in Northern/Western Europe and Australia/New Zealand

<table>
<thead>
<tr>
<th>Country</th>
<th>% Women</th>
<th>% Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>32</td>
<td>28</td>
</tr>
<tr>
<td>Estonia</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Latvia</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Lithuania</td>
<td>27</td>
<td>19</td>
</tr>
<tr>
<td>Austria</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Denmark</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>Switzerland</td>
<td>42</td>
<td>14</td>
</tr>
<tr>
<td>Germany</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td>Austria</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Belgium</td>
<td>38</td>
<td>25</td>
</tr>
<tr>
<td>Finland</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Australia</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>New Zealand</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Netherlands</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Ireland</td>
<td>23</td>
<td>18</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Austria</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Belgium</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Finland</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Australia</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>New Zealand</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>28</td>
<td>25</td>
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<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Ireland</td>
<td>23</td>
<td>18</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
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<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Austria</td>
<td>17</td>
<td>15</td>
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<tr>
<td>Belgium</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Finland</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Australia</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>New Zealand</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>United Kingdom</td>
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<td>25</td>
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<tr>
<td>Norway</td>
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<td>Norway</td>
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<td>Luxembourg</td>
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<td>20</td>
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<tr>
<td>Ireland</td>
<td>23</td>
<td>18</td>
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<td>Norway</td>
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<td>20</td>
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<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Austria</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Belgium</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Finland</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Australia</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>New Zealand</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Norway</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>24</td>
<td>20</td>
</tr>
</tbody>
</table>

Survey question: Are any of the following a source of risk to your personal safety while you are working?

In Australia and New Zealand, at least one in four workers identified workplace violence or harassment as a source of risk at work. Other studies have previously documented moderately high levels of workplace violence and bullying in each of these countries.

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As the proportion of women entering the workforce worldwide continues to grow, questions about occupational risks on men and women will only become more relevant. For workers in the informal economy, meaning millions of women around the world are working without the protection of labour laws and other social benefits, the threat of physical violence and harassment is a risk for them. Chart 5.9 shows that working men and women in low-income economies were more than twice as likely to identify this as a risk than the global average, with nearly four in 10 men (39%) and women (36%) in these countries and territories saying this was a risk for them.

By contrast, in high-income economies, more working women (24%) than men (18%) said physical violence or harassment was a risk for them. This gender pattern persisted in most occupations in high-income countries except for construction.

Survey question: Are any of the following a source of risk to your personal safety while you are working?
These findings reinforce the previous recommendation that different, targeted interventions should be considered for different groups of people — in these cases, based on gender and country income level.

Injuries experienced at work

Injuries experienced at work

Workers in low-income economies were more likely to have been harmed or injured than workers in high-income economies. One in five workers (20%) in low-income economies said they or someone they know has been hurt by three or more of these causes of injury — more than double the rate in high-income economies (9%).

More working men than working women reported having been injured at work in the past two years.

Male workers were more likely than female workers to say they or someone they know has been injured as a result of operating heavy machinery (19% versus 11%, respectively). Globally, the gender gap was much narrower for other types of injuries.

Survey question: Have you or has anyone you work with experienced injury or harm from any of the following while working in the past two years?

- Exposure to chemicals
- Fire
- Physical violence or harassment
- Operating equipment or heavy machinery
- Tripping or falling

Workers in low-income economies were more likely to have been harmed or injured than workers in high-income economies. One in five workers (20%) in low-income economies said they or someone they know has been hurt by three or more of these causes of injury — more than double the rate in high-income economies (9%).

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- Fire
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Survey question: Have you or has anyone you work with experienced injury or harm from any of the following while working in the past two years?

- Exposure to chemicals
- Fire
- Physical violence or harassment
- Operating equipment or heavy machinery
- Tripping or falling
Chart 5.11

Percentage who have experienced harm from physical harassment or violence while working in the past two years, by region

Survey question: Have you or has anyone you work with experienced injury or harm from any of the following while working in the past two years — physical harassment or violence?

In some countries, a significant proportion of women experienced violence and harassment in the workplace. Zambia ranked first in the world in this measure, with 47% of working women reporting this issue. Notably, Australia ranked sixth, with 39% of working women saying they had experienced workplace harassment or violence; just over half that number of working men (24%) reported this issue in Australia.
Apart from trips and falls, Chart 5.12 shows that the youngest workers (those aged 15-29) were more likely than older workers to say they had experienced harm from each of the five causes the survey examined. This relationship aligns with findings from official data sources and existing literature on this subject, suggesting that younger workers are more likely to be risk-takers and more prone to accidents at work.

### Chart 5.12

**Reported experience of harm from selected causes of injury, by the youngest and oldest workers**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Youngest Workers (15-29)</th>
<th>Oldest Workers (50-64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to chemicals</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td>Fire</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Physical violence or harassment</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>Operating equipment and heavy machinery</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Tripping or falling</td>
<td>11</td>
<td>7</td>
</tr>
</tbody>
</table>

*Survey question: Have you or has anyone you work with experienced injury or harm from any of the following while working in the past two years?*

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Workplace safety and mental health

While preventing physical injuries tops the health and safety agendas at most workplaces, results from the World Risk Poll reveal that employers, safety professionals and policymakers need to approach the issue more holistically by also paying attention to workers’ mental health.

Occupational safety should protect mental, as well as physical, health.

The relationship between mental health and absenteeism, presenteeism and productivity is well researched. WHO estimates that the global economy $1 trillion each year in lost productivity28 in mental health costs workplaces about 15.4 million workdays. However, workplace accident reports are highly unlikely to list ‘depression’ or ‘anxiety’ as the root causes of workers’ physical injuries.

While the World Risk Poll does not reveal anything new about the direction of the relationship between mental health and occupational risks, an analysis of results reveals a strong relationship between the two.


Strong, positive safety cultures — where employees are empowered to report unsafe situations and behaviours — benefit employees and employers alike. These cultures enhance the safety of the individual worker and can also reduce a company’s insurance premiums, limit exposure to fines and lawsuits and reduce the leave taken by employees due to accidents on the job.

The Lloyd’s Register Foundation Foresight Review on Global Safety Evidence concluded that information about safety performance and safety culture in an organisation or country should be considered a ‘leading indicator’ of occupational health and safety. Traditional ‘lagging indicators’ focus on outcomes, such as the number of accidents or injuries experienced in the workplace.

Most workers felt free to report safety issues without fear.

In most countries, the building blocks to create these cultures exist. Globally, the World Risk Poll shows that more than eight in 10 workers who work for an employer said they felt they could report safety issues without fear of punishment. And while this sense of trust was less common in lower-income economies, the percentage never fell below 60% of workers in any region of the world.

Chart 5.13

Percentage of workers who have experienced mental health issues, by type of workplace hazard

<table>
<thead>
<tr>
<th>Workplace Hazard</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical harassment or violence</td>
<td>47</td>
<td>18</td>
</tr>
<tr>
<td>Exposure to chemicals</td>
<td>45</td>
<td>19</td>
</tr>
<tr>
<td>Fire</td>
<td>43</td>
<td>19</td>
</tr>
<tr>
<td>Operating equipment or heavy machinery</td>
<td>39</td>
<td>18</td>
</tr>
</tbody>
</table>

Survey question: Have you, or has anyone you work with, experienced injury or harm from any of the following while working in the past two years?

As illustrated in Chart 5.13, workers who said they experienced specific occupational hazards were at least twice as likely to say they also experienced mental health issues. Most notably, workers who experienced harm from physical violence and harassment were the most likely to say they experienced mental health issues, at 47%.

Safety cultures

Empowered to report unsafe situations and behaviours, strong, positive safety cultures enhance the safety of the individual worker and can also reduce a company’s insurance premiums, limit exposure to fines and lawsuits, and taken by employees due to accidents on the job.

Most workers felt free to report safety issues without fear.

In most countries, the building blocks to create these cultures exist. Globally, the World Risk Poll shows that more than eight in 10 workers who work for an employer said they felt they could report safety issues without fear of punishment. And while this sense of trust was less common in lower-income economies, the percentage never fell below 60% of workers in any region of the world.

Only two out of the 142 countries surveyed registered less than 60% of workers who said they felt they could report safety issues without fear of punishment.

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Freedom to report safety issues at work

Perhaps not surprisingly, workers living in countries with weaker safety systems or few regulatory protections were less likely to say they felt free to report safety problems to their employers without fear of punishment. The World Risk Poll finds a moderately strong relationship (correlation of 0.530) between the percentage of workers who said they were free to report safety problems at work and the UL Safety Index — a measure of how well protected a labour force is in a country in terms of the laws or codes that have been adopted to bolster safety. (See Chart 5.14.)

Survey question: Do you agree or disagree with the following statement? You are free to report any safety problems you notice to your employer without fear of punishment.

---

32 As assessed by the Underwriters Laboratories Safety Index. Note that this metric has been discontinued as of April 2020. https://www.ul.com/news/underwriters-laboratories-inc-discontinues-ul-safety-index

33 Ibid.
Results from this analysis further support the idea that country-level labour force protections and regulations help foster workplace cultures where workers can report safety problems without fear of punishment. In the analysis, countries that invest in governance, education, technology, infrastructure and economic development are correlated with fewer unintentional deaths and injuries. The authors find that investment in governance, education, technology, infrastructure and economic development are correlated with fewer unintentional deaths and injuries.34

Workers in rural areas were least likely to feel comfortable reporting safety problems without fear of punishment.

Countries and territories with larger rural populations had the lowest percentages of workers who said they felt safe reporting safety problems to their employers without fear of punishment. Workers in rural areas were least likely to feel comfortable reporting safety problems without fear of punishment.

Responsibility for workplace safety

For safety cultures to work, management at all levels needs to be involved. Worldwide, two in three workers (68%) said that, other than themselves, their employers were the most responsible for their safety. Twelve percent said the government had this role, and only 5% said labour unions were most responsible. About one in 10 workers said ‘nobody’ should be responsible, other than themselves. When asked who they think cares most about their safety while they are working, workers across the world were most likely to say their coworkers and employers do.

In regions such as Southern Africa, Latin America/Caribbean, Northern/Western Europe and Northern America, similar percentages of workers identified the government and labour unions as most responsible for their safety at work. This finding suggests that organisations aiming to improve workplace safety in those countries should engage with labour unions as well as the government.

34 Wroth, D., & Han, A. (2016). 205 The UL Safety Index: Quantifying safety around the world. Injury Prevention, 22(Suppl 2), A75.1-A75.1. https://injuryprevention.bmj.com/content/injuryprev/22/Suppl_2/A75.1.full.pdf


36 Among the 142 countries in the World Risk Poll, the correlation between GDP per capita (log value) and % who say ‘yes, they can report safety problems to employer without fear of punishment’ was 0.614.
Perceptions of safety regulations

Workers who thought safety rules ‘make their job more difficult to do’ were about twice as likely to be injured at work than those who see safety rules as ‘a good thing’.

However, many of the people most vulnerable to a serious workplace injury were also among the countries were less likely to see safety rules as a good thing, compared with upper-middle-income or high-income economies. Additionally, Chart 5.15 shows that workers (both men and women) with lower levels of education were less likely to say safety rules at work are a good thing, even though these workers tend to be more vulnerable to workplace injuries.
Engaged employees were more likely to believe their workplace has a strong safety culture

In 2019, the Gallup World Poll found that 21% of employees worldwide were engaged at work — meaning they are involved in, enthusiastic about, and committed to their work and workplace. Decades of Gallup research shows that employee engagement is linked to a host of positive outcomes, including increased productivity, profitability and, most notably, improved safety.

Findings from the World Risk Poll further illuminate the association between employee engagement and safety. Worldwide, about eight in 10 employees (81%) who were engaged at work agreed they were free to report safety problems to their employer without fear of punishment, compared with 67% of actively disengaged employees who felt this way. This gap persisted even after taking a country’s income level into account.

Furthermore, engaged employees may also be more likely to comply with safety rules at their workplace. Worldwide, 81% of engaged employees thought safety rules at work were a good thing, while 5% said safety rules ‘make their job more difficult to do’. Among disengaged employees, 65% said safety rules were a good thing, while 13% said safety rules make their job more difficult. While more research is needed, these findings reinforce that workplace culture is an important factor tied to worker safety and suggest that employers should take steps to foster engagement.


38 This analysis is based on the results from 108 countries where the World Risk Poll was conducted alongside questions about employee engagement.
Chapter 6:
Climate change risk

Most climate scientists agree that global warming is associated with human activities and is a serious threat to people and their livelihoods. They also warn that climate changes will be substantial and long-lasting in many of Earth’s physical and biological systems. Some even characterise climate change as ‘the biggest global health threat of the 21st century’ and ‘a serious threat to people and their livelihoods. They also warn that climate change is a serious threat to people and their livelihoods.’ Most climate scientists agree that global warming is associated with human activities and is a serious threat. The causes are invisible. It is not an immediate and direct threat for most people. People do not know whether they can mitigate climate change through their actions. By an understanding of how people across the world think and feel about the risks of climate change and the factors that contribute to their perceptions.

The World Risk Poll asked people how serious they think climate change will be to their experiences of harm from severe weather events, such as floods or violent storms. Their perceptions of climate change are shaped by their experiences of harm from severe weather events, such as floods or violent storms. The results show attitudes toward climate change varied considerably at the regional, country and individual levels (demographically). While proportion of people did not. The results indicate that a multitude of factors, including education and gender, help shape attitudes toward climate change. Some studies suggest there is a gap between how serious scientists and other people consider climate change to be. A 2010 assessment of the difficulties involved in climate change communication proposed several reasons why people may not estimate the severity of the issue the same way scientists do:

- The causes are invisible.
- It is not an immediate and direct threat for most people.
- People do not know whether they can mitigate climate change through their actions.

The effects of climate change:

- The causes are invisible.
- It is not an immediate and direct threat for most people.
- People do not know whether they can mitigate climate change through their actions.

The effects of climate change:

- The causes are invisible.
- It is not an immediate and direct threat for most people.
- People do not know whether they can mitigate climate change through their actions.
Key findings

1. Most people believed climate change poses either a ‘very serious’ or a ‘somewhat serious’ threat to people in their country. Worldwide, 41% of people said climate change poses a ‘very serious’ threat to people in their country over the next 20 years. An additional 28% said it poses a ‘somewhat serious’ threat, and 13% said it was ‘not a threat at all’.

2. Top carbon producers were sceptical about climate risk. Just 23% of people in China — the world’s largest producer of carbon — saw climate change as a ‘very serious’ threat. The U.S., which is the second-biggest carbon emitter in the world, had the highest percentage of climate change sceptics among high-income countries; 21% of people in the U.S. viewed climate change as ‘not a threat at all’.

3. Education played a large role in attitudes toward climate change risks. A person’s level of education shapes their attitudes toward climate change risks more than any other demographic factor. People with 16 or more years of education were more likely than those with eight years of education or less to say climate change is a ‘very serious’ threat to people in their countries in the next 20 years.

4. Experience of harm from severe weather events impacted views on climate change. People who had experienced serious harm from severe weather events were more likely to think climate change is a ‘very serious’ threat than those who had not.

5. Local water and air quality influenced perceptions of climate change. People who were not satisfied with the quality of the air or water where they live were more likely than others to say climate change is a ‘very serious’ threat.

6. Men generally viewed climate change less seriously than women. While men and women were about as likely to believe climate change represents a ‘very serious’ threat to people in their countries in the next 20 years, men (particularly older men) were more likely than women to say that climate change is ‘not a threat at all.’
Insight into action

Climate scientists almost unanimously agree that climate change is a serious threat to people and is associated with human activities. While the severity of the problem will affect people in various countries differently, the World Risk Poll finds that most people think climate change poses some level of threat to the next generation (i.e., in 20 years) in their country.

While the World Risk Poll findings suggest that the efforts to communicate the risks from climate change are being understood, a significant proportion of people remain sceptical or have no opinion on the issue. It is often challenging for climate scientists and advocacy groups to disseminate their (relatively complex) research and messages to people. Therefore, to further raise public awareness of climate change risks to health and livelihoods globally and for each country, scientists and others can use the results of the World Risk Poll to support their engagement with different communities, recognising the differences between different demographic groups in society.

Main research questions and topics

- How serious of a threat do people believe climate change to be over the next 20 years, and how do these perceptions relate to their experiences of serious harm from severe weather events?

World Risk Poll question examined in this chapter

- Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.
Global views of climate change risk

The World Risk Poll provides a global snapshot of people’s perceptions of the threat that climate change poses to their country in the next two decades. As Chart 6.1 shows, while most people worldwide said climate change is at least somewhat of a threat to people in their countries in that time frame, they were not universally convinced that it is a ‘very serious’ threat.

Most people believed climate change does not pose a ‘very serious’ threat to people in their country.

Less than half of people (41%) worldwide said climate change is a very serious threat. Notably, nearly one in five people (18%) said they did not know or refused to answer. This group is important to monitor and understand as it translates into roughly 1 billion people.

Chart 6.1

Perceptions of the threat posed by climate change to people’s countries in the next 20 years, global results

- % Very serious threat
- % Somewhat serious threat
- % Not a threat at all
- % Do not know/refused

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.
Factors associated with viewing climate change as a ‘very serious’ threat

Climate change to their country as very serious while people in other countries said it was ‘not a threat at all.’ However, by analysing people’s views on climate change, the World Risk Poll provides insight into the factors most associated with perceptions of climate change as a risk.

**Chart 6.2**

<table>
<thead>
<tr>
<th>Region</th>
<th>% Very serious threat</th>
<th>% Somewhat serious threat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Europe</td>
<td>73</td>
<td>20</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>71</td>
<td>14</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>60</td>
<td>12</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>56</td>
<td>32</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>51</td>
<td>30</td>
</tr>
<tr>
<td>Northern America</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>47</td>
<td>26</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>45</td>
<td>23</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>41</td>
<td>22</td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>41</td>
<td>25</td>
</tr>
<tr>
<td>Middle East</td>
<td>37</td>
<td>29</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td>Central Asia</td>
<td>34</td>
<td>28</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>36</td>
<td>28</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>34</td>
<td>26</td>
</tr>
</tbody>
</table>

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.
While views of climate change as a very serious threat varied widely across regions, people said climate change is a ‘somewhat serious’ or ‘very serious’ threat to people in their country in Europe and the Latin America/Caribbean region were the most likely to say climate change is a very serious threat to people in their countries, with more than seven in 10 people (73% and 71%, respectively) expressing this opinion in each region.

A person’s level of education shaped their attitudes toward climate change risks more than any other demographic factor.

Chart 6.3 shows that, at the global level, people with higher education levels were the most likely to regard climate change as a very serious threat to people in their countries in nearly one in three (30%) of those with zero to eight years of education.

### Chart 6.3

Perceptions of the threat posed by climate change to people’s countries in the next 20 years, by education level and age

<table>
<thead>
<tr>
<th></th>
<th>Global</th>
<th>0-8 years education</th>
<th>9-15 years education</th>
<th>16+ years education</th>
<th>Age 15-29</th>
<th>Age 30-49</th>
<th>Age 50-64</th>
<th>Age 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Very serious threat</td>
<td>41</td>
<td>48</td>
<td>54</td>
<td>42</td>
<td>41</td>
<td>39</td>
<td>38</td>
<td>15</td>
</tr>
<tr>
<td>% Somewhat serious threat</td>
<td>28</td>
<td>17</td>
<td>9</td>
<td>14</td>
<td>29</td>
<td>25</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>% Not a threat at all</td>
<td>13</td>
<td>12</td>
<td>31</td>
<td>14</td>
<td>12</td>
<td>14</td>
<td>14</td>
<td>15</td>
</tr>
</tbody>
</table>

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.
Given that higher levels of education were associated with a better understanding of percentages and proportions, it is not surprising to see a similar link between climate change attitudes and numeracy skills. As shown in Chart 6.4, in every region of the world, people who answered correctly that 10% is the same as 1 out of 10 were more likely to say climate change is a very serious threat.

**Chart 6.4**

**Percentage who said climate change is a ‘very serious’ threat to people in their countries in the next 20 years, by numeracy**

People who answered correctly/incorrectly that 10% is the same as 1 out of 10

<table>
<thead>
<tr>
<th>Region</th>
<th>Correct</th>
<th>Not Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>76</td>
<td>69</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>73</td>
<td>55</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>73</td>
<td>55</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>59</td>
<td>51</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>53</td>
<td>45</td>
</tr>
<tr>
<td>Northern America</td>
<td>52</td>
<td>43</td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>52</td>
<td>43</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>Middle East</td>
<td>41</td>
<td>59</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>39</td>
<td>61</td>
</tr>
<tr>
<td>Central Asia</td>
<td>33</td>
<td>67</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>32</td>
<td>68</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>29</td>
<td>71</td>
</tr>
</tbody>
</table>

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.

Do you think that 10% is bigger than 1 out of 10, smaller than 1 out of 10, or the same as 1 out of 10? If you do not know, please just say so.
Looking at the results by country income group, people in high-income countries were more likely to say climate change is a very serious threat (56%) than those in low-income countries and territories, possibly mirroring country income groups. Substantially fewer people in the low-income (38%) and middle-income country groups (37% in each) said climate change is a very serious threat.

As shown in Chart 6.5, in three high-income regions — Northern America, Europe and Australia/New Zealand — more women than men said climate change is a very serious threat to people in their countries in the next 20 years. In most other regions, more men said this. One exception is the Middle East, where an equal percentage of men and women indicated climate change is a very serious threat to people in their region in the next two decades.

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.
Factors associated with viewing climate change as being ‘not a threat at all’

In five regions, about one in five people believe climate change is ‘not a threat at all’ to people in their countries in the next 20 years: Eastern Africa (20%), Northern America (20%), Central Asia (19%), Northern Africa (18%) and Southern Asia (17%). It is not immediately clear what drives those perceptions.

Existing literature offers explanations behind these views, such as education levels and political or ideological beliefs. For example, as the analysis of the U.S. shows that the politicisation of the climate debate along partisan lines is a potential explanation for the results in that country.

Chart 6.6

Percentage who said climate change is ‘not a threat at all’ to people in their countries in the next 20 years, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Africa</td>
<td>20</td>
</tr>
<tr>
<td>Northern America</td>
<td>20</td>
</tr>
<tr>
<td>Central Asia</td>
<td>19</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>18</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>17</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>14</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>14</td>
</tr>
<tr>
<td>Middle East</td>
<td>14</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>13</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>11</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>11</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>10</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>8</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>7</td>
</tr>
<tr>
<td>Southern Europe</td>
<td>5</td>
</tr>
</tbody>
</table>

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.

Interestingly, there was little evidence that a country’s experience with climate-related hazards played a role in shaping collective attitudes regarding the seriousness of the threat of climate change over the next 20 years. For example, there was no relationship between the perceived seriousness of the climate change threat and the extent that countries are affected by weather-related loss events, as measured by the Germanwatch Global Climate Risk Index. The impact of an individual’s experience of severe weather on climate change risk perception is discussed later in this chapter.

### Climate change: The most sceptical countries

A few countries stand out for their relatively high scepticism about the threat of climate change. In the U.S. — a country where the climate change debate is highly politicised — 21% of people said climate change is not a threat at all to people in their country in the next 20 years. However, in other countries where a large percentage of people said climate change is not a threat — such as Ethiopia (39%) — politics does not seem to explain people’s attitudes.

Instead, scepticism among Ethiopians may reflect the effect of lower education levels. According to the World Poll, 78% of Ethiopians have no more than eight years of education. The immediacy of other risks Ethiopians face — such as financial and health-related risks — may also play a role.

In another instance, almost one in five people (18%) in Finland said climate change is not a threat at all to people in their country. The Finnish government has what is considered to be a positive policy orientation toward climate change, with a current policy goal to be carbon neutral within the next 15 years. Further research is therefore needed to understand why almost one-fifth of Finns believe climate change is not a threat to people in their country in the next 20 years.

In some countries, such as Laos (54%), Nepal (46%) and Cambodia (42%), large percentages of people answered the question by saying they do not know. Further research is needed to understand those findings, but the percentage of ‘do not know’ or ‘refused’ responses tends to be high in each of these countries on other questions as well. Notably, all three countries have large rural populations with generally lower educational attainment.

### The top emitters

According to the International Energy Agency, the U.S. is the second-biggest carbon emitter in the world, behind China. Interestingly, people in China also appeared less concerned about climate change than in the U.S. Nineteen percent of people in India said climate change is not a threat at all, versus 35% who think climate change is a very serious threat.

People in India, the world’s third-biggest carbon emitter, were roughly as sceptical about climate change as people in the U.S. Nineteen percent of people in India said climate change is not a threat at all, versus 35% who think climate change is a very serious threat.

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7 Though, as is discussed further below, encounters with severe weather may alter individual attitudes about climate change.


10 Looking across the 142 countries in the World Risk Poll, the average percentage of people in a country who have 0-8 years of education was 44%.


13 Ibid.
In the southern U.S., climate change scepticism was high despite frequent severe weather events

People in the U.S. were comparatively less likely than people in most countries and territories to say climate change is not a threat at all. However, these perceptions were not uniform in all regions of the country (see Chart 6.7). In the South, 42% of people said climate change is a very serious threat, compared with 53% of people living elsewhere in the U.S.

% Very serious threat % Somewhat serious threat % Not a threat at all % Experienced severe weather

Chart 6.7

Perceptions of the threat posed by climate change versus experience of harm by severe weather events, by U.S. region

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.

Have you or someone you PERSONALLY know, EXPERIENCED serious harm from any of the following things in the past two years — severe weather events, such as floods or violent storms?

The divisive political culture in the U.S. is likely a large factor driving sceptical attitudes toward climate change in the country. Gallup U.S. surveys have shown that the partisan gap in climate change concerns grew from 17 percentage points in 2000 to 48 points in 2017.

15 Due to sample size limitations, this analysis is prevented from comparing attitudes about climate change in the U.S. South against experience of severe weather events.


Severe weather and climate change risk perceptions

Experience of harm from severe weather events influenced views on climate change.

As shown in chart 6.8, more than half of people (53%) who said they (or somebody they know) had experienced harm from severe weather events in the past two years believed that climate change is a very serious threat in the next 20 years. Of those who said they did not experience harm from severe weather events, only 38% said they think climate change is a very serious threat to people in their countries.

Chart 6.8
Perceptions of the threat posed by climate change to people’s countries in the next 20 years, by experience of harm from severe weather events

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.

Have you or someone you PERSONALLY know, EXPERIENCED serious harm from any of the following things in the past two years — severe weather events, such as floods or violent storms?
Climate change: Serious threat or ‘no threat at all’

To better understand which characteristics most influence people’s views about climate change, Gallup conducted two analyses. One determined which groups thought climate change is a very serious threat to people in their countries in the next 20 years; the second examined which groups thought climate change is not a threat at all. The analyses also looked at individual characteristics and country differences and considered key country differences and characteristics, including region (a proxy for culture) and country income level. The analyses also looked at individual characteristics and background information, including demographic traits such as gender, education, age, religion, feelings about household income and numeracy. Other factors analysed included relevant attitudes measured by the World Risk Poll or the Gallup World Poll, such as how satisfied a person is with the quality of the air and water in the area where they live, and whether a person has experienced harm due to severe weather events.

Specifically, a multilevel logistic regression was used, which allows us to control for country-level effects, as well as individual-level predictors. Individuals who said they did not know or had no opinion were not included in this analysis, amounting to 18% of the projection weighted sample.

To some extent, the characteristics most associated with an individual saying climate change is a very serious threat were also significant predictors of an individual saying climate change is not a threat (though in the opposite direction). For instance, educational attainment was the top significant predictor for both attitudes: People with the highest level of education (16 years or more) were more likely than individuals with zero to eight years of education to say climate change is a very serious threat to people in their countries, even accounting for other factors analysed.

Chart 6.9 shows how, on average, a person’s likelihood of regarding climate change as either a very serious threat or not a threat at all changed with an individual’s educational background, holding all other factors (such as gender or age) equal. People with the highest level of education were likely to say climate change is a very serious threat (67%), whereas individuals with lower education levels were more likely than others to say climate change is not a threat at all.

---

**Chart 6.9**

Average probability of saying climate change is a ‘very serious’ threat or ‘not a threat at all,’ by education level

<table>
<thead>
<tr>
<th>% Very serious threat</th>
<th>% Not a threat at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8 years education</td>
<td>55</td>
</tr>
<tr>
<td>9-15 years education</td>
<td>61</td>
</tr>
<tr>
<td>16+ years education</td>
<td>67</td>
</tr>
</tbody>
</table>

Survey question: Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in your country in the next 20 years? If you don’t know, please just say so.
Numeracy on people's views about climate change risk, though not as strong as education. In general, people who answered the numeracy question correctly were more likely than others to think climate change is a very serious threat to people in their countries in the next 20 years.

Interestingly, individuals who said they were living comfortably on their household income were less likely to say climate change is a serious threat compared to those who were struggling. More financially comfortable individuals were, in turn, more likely than others to say climate change is not a serious threat at all.

Attitudes about the quality of air and water were also significant predictors. People who were not satisfied with the quality of air and water in their country were more likely to take climate change seriously than those who were satisfied. This relationship works in reverse when looking at whether climate change risk was not a serious threat.

While men and women were about as likely to believe climate change represents a ‘very serious’ threat to people in their countries in the next 20 years, men were more likely than women to say climate change is ‘not a threat at all’.

Finally, experience with severe weather events is particularly powerful in understanding attitudes about climate change. People who have experienced serious harm from severe weather events were more likely to think climate change is a very serious threat than those who have not.

Of climate change risks is needed, as no single factor appears universally responsible for shaping people's perceptions of climate change risks.
Chapter 7: Technology-related risk perceptions

New technologies have the power to transform economies and societies; however, because they are new, they can cause people to worry as the degree of risk is unknown.

Public perceptions of the risks associated with economy-wide technologies often play an important role in whether governments decide to adopt them. Public perceptions of new technologies can also influence how governments and the private sector allocate resources and determine what safety regulations to design and implement.

For example, the discovery of nuclear power held the promise of a powerful new ‘clean’ energy source with a low environmental impact. But it will be forever linked to devastating accidents — such as those in the U.S. in 1979, Russia in 1986 and Japan in 2011 — that keep many from embracing the technology. The U.S. did not build nuclear reactors for nearly three decades after the Three Mile Island disaster.

Artificial intelligence (AI) is the latest controversial technology. Use in the global economy is predicted to grow, but this growth concerns many people, especially in regard to potential violations of privacy, misuse of personal data and discrimination, as well as other ethical, safety and security risks.

The links between new technology and economic development are well studied. However, far less is known about people’s perceptions of these technologies. While some research and data exist on public perceptions of risk in a few (mostly developed) countries, there is little — if any data — for most developing countries. The World Risk Poll is the first global survey to explore how people think and feel about three controversial technologies, providing data to fill this gap.

The poll considers risk perceptions around nuclear power for electricity generation, artificial intelligence. These technologies were selected based on their potential transformative impact on people and economies and the highly emotional reaction they can elicit.

Key findings

1 People were sceptical about the benefits of genetically modified (GM) foods. At the global level, 48% of adults said GM foods will mostly harm people in their country over the next 20 years, while 21% said they will mostly help.

2 GM foods were better perceived in low-income countries. Generally, people in low-income countries were almost twice as likely as people living in higher-income countries to say GM foods will mostly help people in their country (43% to 22%, respectively).

3 Opposition to GM foods was strongest in higher-income countries. People in high-income economies seemed to view GM foods as a food safety issue. In general, people who believed their government does a good job of ensuring food safety were more likely to say GM foods will mostly help people, especially in high-income regions.

4 More people perceived nuclear power as helpful than harmful. People worldwide were more likely to say nuclear power will mostly help (40%) rather than mostly harm (29%) people in their country over the next 20 years. Optimism about nuclear power generation was higher and more consistent in low-income countries, where access to electricity is often less reliable.

5 Perceptions of risk from AI varied significantly across regions. People in Southern Europe, Latin America/Caribbean and Northern America were most likely to say that AI will mostly harm people in the next 20 years. Eastern Asians were the most likely by far to say AI will mostly help people in the next 20 years.

6 Sceptical about science, sceptical about AI. At the country level, scepticism about AI was strongly associated with scepticism about science in general. In countries where trust in scientists is low, people were more likely to say AI mostly harms people.

Insight into action

New technologies can make people’s lives better, but they also come with an unknown degree of risk that can make people hesitant to embrace them. The World Risk Poll data and analyses show that many people were sceptical about new technologies and perceived that the new technology will not benefit them or could even harm them.

The World Risk Poll results support the understanding that a complex interplay of factors drives risk perceptions. These need to be recognized and integrated into policies and initiatives that seek to influence the acceptance of technologies. To pave the way for public acceptance of new technologies, the scientific research and policy communities should demonstrate that they take people’s concerns seriously and make more concerted efforts to understand and address concerns at a local level for different sections of society.

For example, people’s attitudes toward AI may vary depending on how vulnerable they are to this new technology costing them their jobs. Policymakers could address these fears if they proactively implement programmes to upskill workers worried about losing their livelihoods.
Main research questions and topics

- Do people think that three controversial technologies — genetically modified (GM) foods, the use of nuclear power for electricity generation and artificial intelligence — will mostly harm or mostly benefit people in the long term? What cultural, economic, demographic or other factors seem to influence these perceptions?

World Risk Poll question examined in this chapter

- Please tell me whether you think each of the following will mostly help or mostly harm people in this country in the next 20 years. If you don’t have an opinion about this, please just say so.
  A. Genetically modified foods
  B. The use of nuclear power for electricity
  C. Machines or robots that can think and make decisions, often known as artificial intelligence
Public perceptions of the risks and rewards of three controversial technologies

The World Risk Poll asked people how they generally perceive three forms of technology that have the potential to benefit people and societies as a whole but could also cause serious harm if they ‘went wrong.’ These technologies are genetically modified (GM) foods, the use of nuclear power to generate electricity, and machines or robots capable of thinking and making decisions, often known as artificial intelligence (AI).

All three technologies can potentially help society in vital areas, including food, energy and productivity, but each has generated considerable debate and controversy. Often, people’s perceptions of the balance of the risks and rewards associated with these three technologies do not align with experts’ views.

The World Risk Poll results show that, worldwide, GM foods generated the greatest concern of the three technologies — with more than twice as many people saying it will ‘mostly harm’ than ‘mostly help’ people (48% to 21%, respectively). As is evident in Chart 7.1, nuclear power and AI, by contrast, were seen more positively — with about four in 10 people saying they will be mostly helpful and nearly three in 10 people saying they will be mostly harmful.

Chart 7.1
Perceptions that new technologies will ‘mostly help’ or ‘mostly harm’ people, global results

Survey question: Please tell me whether you think each of the following will mostly help or mostly harm people in this country in the next 20 years. If you don’t have an opinion about this, please just say so.


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Genetically modified foods

GM foods have long been a source of controversy, especially in Europe. Sceptics there argue that too much is still unknown about the long-term effects of genetic modification and that the consequences of possibly introducing contaminated crops into the world’s food supply are too severe to ignore. In 2015, the European Parliament lifted an EU-wide ban on GM crops — leaving it to national governments to create their own regulations — but many countries retained the ban.

In other regions, such as sub-Saharan Africa, many countries have restricted the development and use of GM foods.

People were sceptical about the benefits of genetically modified foods.

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As shown in Chart 7.2, perceptions of GM foods in most regions were negative — including in all regions of Europe, Latin America/Caribbean, Northern America, Central Asia and the Middle East. Such strong negative sentiment has, at least in some countries such as Switzerland and Germany, led policymakers to implement partial or outright bans of GM foods.\textsuperscript{11, 12}

\textbf{Chart 7.2}

Perceptions that genetically modified foods will 'mostly help' or 'mostly harm' people in the next 20 years, by region

Survey question: Do you think genetically modified food will mostly help or mostly harm people in your country in the next 20 years?


12 This includes over two dozen European countries, as well as countries in Latin America (Venezuela and Ecuador), Central Asia (Kyrgyzstan) and the Middle East (Turkey and Saudi Arabia). The only region where a majority of people saw genetically modified food as mostly harmful, but no country has implemented a partial or full ban on the technology, was Northern America — i.e., the US and Canada.
The two exceptions to this trend were Central/West Africa — where attitudes were more evenly divided — and Eastern Africa — where people were more likely to say GM foods will be mostly helpful rather than mostly harmful to their countries. These two regions also register the poorest performance on the Gallup World Poll Food and Shelter Index, a measure of people’s ability to meet these two basic needs.

In countries where more people struggle to afford food, views about genetically modified foods were generally more positive (see Chart 7.3), suggesting that people balanced the types of risk they face based on their personal circumstances. Where food hardship is a common problem, people appeared less concerned about the potential risks associated with a new source of food and, instead, focused on food security risk.

**Chart 7.3**

**Relationship between the percentage who said genetically modified food will ‘mostly help’ people in their country and average scores on the Gallup World Poll Food and Shelter Index, by country**

<table>
<thead>
<tr>
<th>Country</th>
<th>% Mostly help</th>
<th>Food and Shelter Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swaziland</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>Nigeria</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>South Africa</td>
<td>60</td>
<td>70</td>
</tr>
<tr>
<td>India</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Thailand</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>Brazil</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>Singapore</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Philippines</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Mexico</td>
<td>0</td>
<td>10</td>
</tr>
</tbody>
</table>

*Survey question: Do you think genetically modified food will mostly help or mostly harm people in your country in the next 20 years?*

13 The Gallup World Poll Food and Shelter Index assesses the ability people have to meet basic needs for food and shelter. The index is scored on a scale between 0 and 100 (inclusive) at the country level. Lower scores indicate that a greater number of respondents in a country struggled to afford food and shelter in the past year, while higher scores indicate fewer respondents reported such struggles.

14 The correlation between a country’s Food and Shelter Index score and the national percentage who said genetically modified foods ‘mostly help’ is -0.562 among 108 countries where both data points were available.
The Lloyd’s Register Foundation World Risk Poll Report 2019

Supporters of genetically modified foods have long argued that the benefits of this technology—e.g., increasing food supply while lowering costs—strongly outweigh any potential risks. The World Risk Poll finds that people in low-income economies or areas with food security problems were most likely to agree with this view.

GM foods were better perceived in low-income countries; opposition was strongest in higher-income countries.

... (economies or areas with food security problems were most likely to agree with this view.)

Nuclear power for electricity generation

Opinions on nuclear power varied throughout the world. Like genetically modified foods, people in high-income economies, including much of Europe and Australia/New Zealand, were more likely to say nuclear power would mostly harm people in their countries. People were particularly negative in Southern Europe, where 62% said nuclear power would mostly harm people in their countries.

This high level of opposition has produced tangible results at the policy level in some Southern European countries. For example, in Spain—where 67% said nuclear power will mostly harm people in their country—the government has announced it will shut down all nuclear power plants by 2030. Italy—one of the first countries to use nuclear power for civil power generation—no longer produces any nuclear power, partly because Italians voted in a 2011 referendum against restarting the country’s nuclear programme.

More people perceived nuclear power as helpful than harmful. Optimism about nuclear power generation was higher and more consistent in low-income countries, where access to electricity is often less reliable.

People in low-income economies were the most positive about nuclear energy (52% said it will mostly help, versus 21% mostly harm). In contrast, 39% said it will mostly help, versus 43% who said it will mostly harm.


As shown in Chart 7.4, people in most regions of Africa and Asia, the Middle East and Northern America were more inclined to see nuclear power as mostly helpful rather than mostly harmful. In some countries, such as China, positive sentiments about nuclear energy correspond with government efforts to develop the country’s nuclear industry in recent years.

**Survey question:** Do you think the use of nuclear power for electricity will mostly help or mostly harm people in your country in the next 20 years?

**Chart 7.4**

Perceptions that nuclear power will ‘mostly help’ or ‘mostly harm’ people in the next 20 years, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Mostly help</th>
<th>Mostly harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Europe</td>
<td>23</td>
<td>62</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>36</td>
<td>46</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>Latin America &amp; the Caribbean</td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td>Central Asia</td>
<td>32</td>
<td>39</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>34</td>
<td>38</td>
</tr>
<tr>
<td>Northern America</td>
<td>30</td>
<td>46</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>37</td>
<td>32</td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>31</td>
<td>44</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>27</td>
<td>50</td>
</tr>
<tr>
<td>Middle East</td>
<td>27</td>
<td>48</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>25</td>
<td>41</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>20</td>
<td>44</td>
</tr>
</tbody>
</table>

Chart 7.5 shows that people’s perceptions of nuclear power as an electricity source also improved with education. In high-income economies, 46% of people with 16 or more years of education said nuclear energy will mostly help their countries in the next 20 years, compared with 37% of those with nine to 15 years of education and 29% of those with zero to eight years of education.

**Chart 7.5**

Perceptions that nuclear power will ‘mostly help’ or ‘mostly harm’ people in the next 20 years, by education

Percentages among people in high-income economies

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Mostly Help</th>
<th>Mostly Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8 years</td>
<td>29%</td>
<td>45%</td>
</tr>
<tr>
<td>9-15 years</td>
<td>37%</td>
<td>46%</td>
</tr>
<tr>
<td>16+ years</td>
<td>46%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Survey question: Do you think the use of nuclear power for electricity will mostly help or mostly harm people in your country in the next 20 years?

Similarly, people who correctly answered the numeracy question were more likely than those who answered incorrectly to say nuclear power will mostly help their countries in the next 20 years. This relationship holds even after accounting for country income level, as shown in Chart 7.6.

**Chart 7.6**

Percentage who said nuclear power will ‘mostly help’ people in the next 20 years, by numeracy and country income group

People who answered correctly/incorrectly that 10% is the same as 1 out of 10

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Correct</th>
<th>Not Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>58%</td>
<td>50%</td>
</tr>
<tr>
<td>Lower-middle income</td>
<td>46%</td>
<td>38%</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>46%</td>
<td>34%</td>
</tr>
<tr>
<td>High income</td>
<td>42%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Survey question: Do you think the use of nuclear power for electricity will mostly help or mostly harm people in your country in the next 20 years?

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19 World Risk Poll Survey Question: Do you think that 10% is bigger than 1 out of 10, smaller than 1 out of 10, or the same as 1 out of 10? If you do not know, please just say so.
(47%) of women in high-income economies said nuclear power for electricity generation will mostly harm people, while fewer than one in three (30%) said it will mostly help. The results for men were almost identical.

As shown in Chart 7.7, while the attitudes of men in high-income economies became more positive with education, the relationship between education and perceptions was weak among women.

**Chart 7.7**

Perceptions that nuclear power will ‘mostly help’ or ‘mostly harm’ people in the next 20 years, by gender and education level in high-income economies

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Women (high-income economies only)</th>
<th>Men (high-income economies only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8 years education</td>
<td>% Mostly help 26</td>
<td>% Mostly help 34</td>
</tr>
<tr>
<td></td>
<td>% Mostly harm 43</td>
<td>% Mostly harm 48</td>
</tr>
<tr>
<td>9-15 years education</td>
<td>% Mostly help 28</td>
<td>% Mostly help 46</td>
</tr>
<tr>
<td></td>
<td>% Mostly harm 49</td>
<td>% Mostly harm 40</td>
</tr>
<tr>
<td>16+ years education</td>
<td>% Mostly help 37</td>
<td>% Mostly help 54</td>
</tr>
<tr>
<td></td>
<td>% Mostly harm 44</td>
<td>% Mostly harm 35</td>
</tr>
</tbody>
</table>

Survey question: Do you think the use of nuclear power for electricity will mostly help or mostly harm people in your country in the next 20 years?

Gender gaps in attitudes toward nuclear power are well documented. As recently as 2012, one year after the Fukushima accident, a Gallup survey found that 72% of U.S. men — but only 42% of U.S. women — believed nuclear power plants were generally safe. As far back as 1996, a review of academic research found that women generally expressed higher levels of concern about technological and environmental issues — particularly those where there is a risk of contamination and severe health implications. Further research is needed to understand what drives these differences.

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Artificial intelligence

Previous studies have shown that many people have concerns about the use of artificial intelligence (AI) because of issues such as loss of jobs, violations of privacy and misuse of personal data.

As shown in Chart 7.8, at the regional level, people in Eastern Asia were by far the most likely to say AI will mostly help people in the next 20 years, at 59%, with only 11% saying it will mostly harm people. This region includes countries that are considered leaders in AI technology development, including China, Japan and South Korea.

Many analysts consider China in particular to be a leader. In recent years, the Chinese government has worked closely with commercial businesses on AI advancements in many areas, from autonomous vehicles to medical equipment and financial systems. Notably, people in China were the least likely in the world to believe AI will mostly harm people in the next 20 years, at just 9%.

---


People in Southern Europe were among the most likely to say AI technology will mostly harm people in their country, at 51%. A similar 49% of people in the Latin America/Caribbean region and 47% in Northern America said AI will mostly harm people in their country in the next two decades. (See Chart 7.8.)

![Chart 7.8](image)

**Perceptions that artificial intelligence will 'mostly help' or 'mostly harm' people in the next 20 years, by region**

<table>
<thead>
<tr>
<th>Region</th>
<th>Mostly help</th>
<th>Mostly harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Europe</td>
<td>37</td>
<td>51</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>26</td>
<td>49</td>
</tr>
<tr>
<td>Northern America</td>
<td>41</td>
<td>47</td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>40</td>
<td>44</td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>41</td>
<td>42</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>34</td>
<td>40</td>
</tr>
<tr>
<td>Southern Africa</td>
<td>37</td>
<td>43</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>Central Asia</td>
<td>36</td>
<td>34</td>
</tr>
<tr>
<td>Middle East</td>
<td>33</td>
<td>38</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>31</td>
<td>33</td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>35</td>
<td>32</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>30</td>
<td>45</td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>25</td>
<td>37</td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>11</td>
<td>59</td>
</tr>
</tbody>
</table>

Survey question: Do you think the use of artificial intelligence will mostly help or mostly harm people in your country in the next 20 years?

Overall, views about the benefits of AI did not seem as clearly linked to a country’s wealth or resources as perceptions of GM foods or nuclear power. People in high-income economies were about as likely as those in low-income economies to say AI will mostly help people in their country, at 44% and 45%, respectively.
Scepticism about AI and science

World Risk Poll analysis reveals that, at the country level, scepticism about AI was strongly related to scepticism about science overall.

Comparing country-level results on this index against people’s perceptions of AI shows that, in countries where trust in scientists is lower, people were more likely to believe AI will mostly harm others. (See Chart 7.9.)

Survey question: Do you think the use of artificial intelligence will mostly help or mostly harm people in your country in the next 20 years?

However, opinions about AI did vary depending on an individual’s age and gender. As Chart 7.10 shows, younger people, particularly those aged 15 to 29, were more likely than older people to see AI as mostly beneficial — perhaps because they feel more comfortable with new technology. Fewer women than men said AI will mostly help people in their country.

**Chart 7.10**

**Perceptions that artificial intelligence will ‘mostly help’ or ‘mostly harm’ people in the next 20 years, by gender and age**

- % Mostly help
- % Mostly harm
- % No opinion

Survey question: Do you think the use of artificial intelligence will mostly help or mostly harm people in your country in the next 20 years?
Chapter 8:
Internet-related risk perceptions

When Sir Tim Berners-Lee invented the World Wide Web in 1989 as a tool to help scientists share information, he intended to make it freely available to people everywhere and In the three decades since, the internet has transformed commerce, created far-reaching social networks and improved access to essential information and services across much of the world.

However, the web has not always been used for the good of humankind. Berners-Lee recently wrote that:

While the web has created opportunity, given marginalised groups a voice and made our daily lives easier, it has also created opportunity for scammers, given a voice to those who spread hatred and made all kinds of crime easier to commit.

— Sir Tim Berners-Lee

While many studies have been conducted in developed economies regarding people’s awareness and perceptions of potential harms from using the internet, little is known about attitudes in developing economies. The understand how people in these economies view the risks associated with this technology.

those who had used either in the 30 days prior to when the survey was administered) worry about being harmed from internet use, focusing on three risks: online bullying, receiving false information (‘fake news’) and being the victim of fraud. We selected these three risks because of the potential threat they present to billions of internet users.

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Insight into action

Young internet users were disproportionately worried about online bullying. Overall, three out of four respondents (75%) agreed that receiving false information is a risk, compared to 45% who worried about online fraud and 30% who worried about online bullying. However, the poll also revealed that a significant number of people worldwide did not see false information as a risk, and that efforts to address this issue should be targeted towards specific demographics.

Older, more educated internet users were more likely to worry about fraud. Worldwide, nearly half of internet users (45%) said they worry about online fraud. Unlike concerns about online bullying or misinformation, internet users’ likelihood to worry about fraud rose with their age and education level. Older internet users, especially those in high-income economies, worried about it most.

The results also suggest that younger internet users and internet users with lower levels of education were less likely to worry about online fraud than older users and those with more education. A number of studies in developed economies show that younger people are more likely than older people to fall victim to online scams. Given the potentially high costs of online fraud, these findings point to a need for more targeted interventions to empower individuals who face these risks, such as education and information campaigns for younger internet users and those with less education.

Additionally, governments should consider younger users’ vulnerability to online bullying more seriously and look for intervention and prevention strategies that could provide safer environments for young people when they are using the internet.

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Main research questions and topics

- How much do internet and social media users worry about three types of risks associated with internet use: online bullying, receiving false information, and being the victim of fraud?

World Risk Poll questions examined in this chapter

- Have you used the internet, including social media, in the past 30 days?
- When using the internet or social media, do you worry about any of the following things happening to you?
  A. Online bullying, such as someone sending you a hateful message or comment through social media
  B. Receiving false information, such as news or information which is not true
  C. Fraud, such as someone stealing your bank information or your money
Risks associated with using the internet and social media

While more than half the world’s population uses the internet, billions of people still do not have access to the internet. For that reason, before asking people about the risks they worry about when they use the internet, the World Risk Poll asked people whether they had used the internet, including social media, in the past 30 days\(^6\). (See Chart 8.1.)

Worldwide, slightly more than half (53%) of people said they had used the internet in that time.

\(^6\) This time period was selected to enable accurate recall.
The global profile of internet users

As shown in Chart 8.2, globally, more men than women said they used the internet. The World Risk Poll also finds that people with higher levels of education were more likely to use the internet, as were younger people compared to older people. In regions where the internet is still a relatively new technology, ‘early adopters’ include young people and those with higher education levels. Internet use was particularly low in countries with generally lower levels of education.

Chart 8.2

Percentage who used the internet in the past 30 days, by gender, age and education level

Survey question: Have you used the internet, including social media, in the past 30 days?

The remaining questions in this chapter were asked only of those who had used the internet or social media in the month prior to the survey.

7 In some countries, the sample of past-month internet users fell below n=250; in these cases, country-level results have a relatively high error margin and should be interpreted with caution. In two countries where the sample fell below n=100, Madagascar and Rwanda, results for internet users are not reported.
Concerns about using the internet

As shown in Chart 8.3, overall, the most widely shared concern among internet users was receiving false information, with more than half (57%) saying they worry about this risk. Just under half (45%) said they worry about fraud, while three in ten (30%) were concerned about online bullying.

**Chart 8.3**

Percentage of internet users worried about selected internet-related risks, global results

<table>
<thead>
<tr>
<th>Risk</th>
<th>% Yes</th>
<th>% No</th>
<th>% Do not know/refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bullying</td>
<td>30</td>
<td>69</td>
<td>1</td>
</tr>
<tr>
<td>Receiving false information</td>
<td>57</td>
<td>42</td>
<td>1</td>
</tr>
<tr>
<td>Fraud</td>
<td>54</td>
<td>45</td>
<td>1</td>
</tr>
</tbody>
</table>

Survey question: When using the internet or social media, do you worry about any of the following things happening to you?

**False information**

The spread of inaccurate or misleading information on the internet can have severe consequences. This has been particularly evident during the COVID-19 pandemic in 2020 when, for example, some online sources have suggested drinking bleach and ethanol can kill the virus8.

Internet users were most likely to worry about false information online.

The World Risk Poll was conducted in 2019, before the global pandemic, and the results clearly indicate that people were worried about false information before the pandemic. The World Risk Poll shows that internet users in some regions were much more likely than others to worry about receiving false information online. Concern was more prevalent in regions where factors such as high economic inequality and ethnic, racial and religious polarisation tend to exist, rendering weaker social cohesion and trust.

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Chart 8.4 shows that, at the country level, the percentage of internet users worried about receiving false information was strongly related to income inequality. Worry was also particularly common in countries with deep social or political divides such as Bolivia, Turkey, Uganda and the U.S.

Survey question: When using the internet or social media, do you worry about receiving false information, such as news or information which isn’t true?

9 R=0.431 among 131 countries, using World Bank GINI coefficient estimates, retrieved May 23, 2020, from https://data.worldbank.org/indicator/SI.POV.GINI
Concern about receiving false information was equally shared across different demographics, including age. This finding stands in contrast to the other two internet-related risks, which were either more common among young internet users (online bullying) or older internet users (fraud). Roughly six in 10 internet users in each age group said they worry about receiving false information. (See Chart 8.5.)

**Chart 8.5**

Percentage of internet users worried about receiving false information, fraud and online bullying, by age

<table>
<thead>
<tr>
<th></th>
<th>Age 15-29</th>
<th>Age 30-49</th>
<th>Age 50-64</th>
<th>Age 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving false information</td>
<td>57</td>
<td>56</td>
<td>57</td>
<td>60</td>
</tr>
<tr>
<td>Fraud</td>
<td>42</td>
<td>45</td>
<td>49</td>
<td>55</td>
</tr>
<tr>
<td>Online bullying</td>
<td>34</td>
<td>30</td>
<td>26</td>
<td>21</td>
</tr>
</tbody>
</table>

Survey question: When using the internet or social media, do you worry about any of the following things happening to you?

That more internet users worried about receiving false information online than any of the other threat may seem surprising, particularly with respect to the risk of fraud, which typically has more visible personal consequences. However, it is possible that internet users were more concerned about the risk of receiving false information online because of the recent attention that this has been receiving from the media and policymakers11,12.

Online bullying

Overall, 30% of internet users worldwide said they worried about online bullying. This figure was somewhat higher among women (32%) than men (28%), but differed most substantially by age group. About one in three internet users between the ages of 15 and 29 (34%) said they worry about online bullying, compared with about one in five of those aged 65 and older (21%).

Previous country-specific surveys have documented widespread concern about online bullying. A 2017 Pew survey of U.S. adults found that about four in ten had personally experienced some form of online harassment—from offensive name-calling to more severe behaviors like cyberstalking—and 62% considered it a major problem.

Young internet users were disproportionately worried about online bullying.

* has focused on younger people in more economically developed countries, particularly teenagers, who are seen as especially vulnerable. Existing research shows that this abuse takes a disproportionately high toll on young people’s mental health.

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Concern about online bullying also varied widely by region and country income level, largely due to the average age of internet users in a given country. Populations in low-income economies tend to be younger\textsuperscript{17}, which is partly why the percentage of people who worry about online bullying was much higher in low-income countries (53\%) than in middle-income (32\%) or high-income countries and territories (23\%).

Chart 8.6 shows the percentage of internet users in a country who worry about online bullying versus the average age of internet users (in the World Risk Poll sample). As internet access increases in lower-income regions, governments need to be aware of younger users’ vulnerability to online bullying and implement intervention and prevention strategies to improve online safety.

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**Online fraud**

As more global commerce has moved online, online fraud has become one of the world’s most financially damaging illegal activities. A 2018 report from the Center for Strategic and International Studies estimated the total global cost of cybercrime at almost $600 billion per year, or 0.8\% of global GDP\textsuperscript{18}. The most common forms of fraud internet users encounter are ‘spoofing’ and ‘phishing.’ Both tactics try to trick users by disguising websites or emails as trusted sources to elicit personal or sensitive information such as account passwords or credit card information.

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\textsuperscript{19} Other sources estimate this figure to be much higher. That is often due to different methodologies of estimation, including what elements of online fraud are included in the definition.
Older internet users, especially those in high-income economies, were most worried about online fraud.

Worldwide, 45% of those who have used the internet or social media in the past month said they worry about online fraud. As shown in Chart 8.7, unlike concerns about online bullying or misinformation, internet users’ worry about fraud rose with their age and education level.

Survey question: When using the internet or social media, do you worry about any of the following things happening to you — fraud?
Chart 8.8 shows that, regionally, internet users in Western Europe were particularly likely to say they worry about online fraud, including at least two-thirds of internet users in Portugal (78%), France (74%), Spain (71%), the U.K. (69%) and Italy (67%).

Given the scale and cost of internet-related fraud worldwide, the World Risk Poll results show that there is a need for more targeted interventions (such as education and information campaigns) to make people more aware of the prevalence and costs of online fraud. This is particularly the case among younger internet users and those with lower levels of education.
Chapter 9: 
Food and water risk

According to the Food and Agriculture Organization of the United Nations (FAO), ‘if it isn’t safe, it isn’t food’. The WHO estimates that 600 million people fall ill each year from eating unsafe food. Furthermore, this food kills an estimated 700,000 people each year, one-third of whom are children. Hunger in some parts of the world is at crisis levels, and unsafe food and water have the potential to make the situation even worse. In addition to the associated human misery, foodborne illnesses cost the global economy hundreds of billions of dollars each year.

Lloyd’s Register Foundation considers the long-term safety of food to be one of the biggest safety challenges facing society, especially given the demands on the food supply system. With the global population forecast to reach nearly 9.7 billion in 2050, there will be even more pressure on the world’s food systems, making food safety an even greater challenge than it is today.

To be able to design effective interventions that improve food safety, policymakers need more accurate data. But for many developing countries, these data are scarce. The World Risk Poll provides data about food and water safety, building on the analysis in earlier chapters to provide a more holistic view of the topic. We also reveal a new composite measure questions related to food and water safety, building on the analysis in earlier chapters to provide a more holistic view of this topic. We also reveal a new composite measure questions about how people perceived their government’s performance in keeping critical infrastructure safe.


Key findings

1. Contaminated food and drinking water caused serious harm to nearly one-third of people globally. (17%) said they or someone they personally (eating food in the past two years. Nearly as (drinking water.

2. Few people considered contaminated food and water to be one of the biggest threats to their safety, despite the high number of people it harms. Globally, only 3% of adults identified unsafe food or water as one of the biggest threats to their daily safety. This finding likely reflects the relatively low ‘dread effect’ people associate with food and water risks, implying that people do not consider the potential harm from unsafe food and water to be severe compared with other risks they face in their daily lives.

3. Past experiences with unsafe food and water did not change who people trust for information about food safety. Regardless of whether they had experienced serious harm from eating contaminated food, people named family and friends and medical professionals as the two most trusted sources than government agencies.

4. People in Eastern Europe were most likely to give a poor rating on their governments’ performance on food safety. In Eastern Europe, more than half (52%) said their governments were not doing a good job of keeping the food they buy safe. Nearly half of the populations in the Latin America/Caribbean region, Southern Europe and the Middle East also gave their governments poor ratings on food safety.

5. Confidence in national institutions was associated with perceptions of government safety performance. In general, the World in their national institutions, such as the national government and the judiciary, was related to their perceptions about their government’s safety performance.
Insight into action

Given the human and economic cost of food and water safety issues, the World Risk Poll findings highlight the need for more evidence-informed education and training about food and water safety. Even in countries where a significant number of people had experienced serious harm from contaminated food and water, many did not identify it as a major risk.

The lack of recognition of unsafe food and water as a major risk may be related to the relatively low ‘dread effect’ perception associated with contaminated food and water compared with other, more immediate risks people face in their daily lives. In some regions, more people have experienced harm from unsafe food and water than worry about it, suggesting that action is required. Policy interventions should empower communities through better awareness and practical guidance on how to reduce the risks of harm.

Main research questions and topics

- How worried are people about the safety of the food they eat and the water they drink?
- What is the relationship between people’s worry levels and personal experiences of harm from food- and water-related risks?
- What sources of information do people trust the most about food safety?
- How do people rate their government’s performance in keeping critical infrastructure safe; namely, food, drinking water and power lines? Is there a link between the levels of confidence in government and the levels of worry about food safety?
World Risk Poll questions examined in this chapter

- In your own words, what is the greatest source of risk to your safety in your daily life?
- Other than what you just mentioned, in your own words, what is another major source of risk to your safety in your daily life?
- In general, how worried are you that each of the following things could cause you serious harm? Are you very worried, somewhat worried, or not worried?
  - A. The food you eat
  - B. The water you drink
- How likely do you think it is that any of the following things could cause you serious harm in the next two years? Is it very likely, somewhat likely, or not likely at all?
  - A. The food you eat
  - B. The water you drink
- Have you, or someone you personally know, experienced serious harm from any of the following things in the past two years?
  - A. Eating food
  - B. Drinking water
- Suppose you wanted to find out if the food you eat is safe. Would you look to any of the following sources for information, or not?
  - A. Friends or family
  - B. Medical professionals, such as your local doctor or nurse
  - C. Newspapers, television or radio
  - D. The internet/social media
  - E. (Name of government agency responsible for food safety)
  - F. The packaging or label on the food
  - G. A famous person you like
  - H. Local religious leaders
- Considering the sources of information you would access, which one would you trust most to provide information about food safety?
- In general, in your opinion does the government do a good job ensuring that the following are safe, or not?
  - A. The food you buy
  - B. The water you drink
  - C. The power lines in the city or area where you live
Food and water safety risks

While contaminated food and water kill and injure people in all countries and territories around the world, both FAO and the WHO estimate that most of the burden falls on lower-income countries in Africa and Southern Asia. For many people in higher-income countries, it is possible to seek (low-cost or even no-cost) medical attention when feeling unwell due to eating contaminated food. However, for a large number of people in low-income countries and territories that is not an option, amplifying the burden of eating contaminated food.

However, the lack of accurate, comparable data on prevalence rates of harm from unsafe food from food safety professionals and policymakers. The World Risk Poll includes two questions that seek to serious harm from unsafe food and water.

Contaminated food and drinking water caused serious harm to nearly one-third of people globally.

However, the lack of accurate, comparable data on prevalence rates of harm from unsafe food from food safety professionals and policymakers. The World Risk Poll includes two questions that seek to serious harm from unsafe food and water.

It should be noted that the understanding of the term ‘serious harm’ was left to each individual to assess.
The World Risk Poll: A new data set on experience of harm from unsafe food

The UN has declared safe food a universal human right. Yet, despite the global nature of the safety threat from contaminated food, policymakers and food safety professionals have been hampered by the lack of rigorous and comprehensive data on the level and nature of foodborne hazards and the prevalence of associated foodborne illnesses.

The World Risk Poll provides cross-country evidence on the global prevalence of serious harm from eating unsafe food. It fills a gap in the many countries where very little or no data exist on this subject. The poll data complement the best existing data, generated by the WHO in a 2007-2015 initiative that provided the first global estimates of the impact of foodborne diseases. Their findings indicated that the highest burden of foodborne disease was in Africa and South-East Asia. The next worst-hit region was the Eastern Mediterranean (which includes Afghanistan, Pakistan, Iraq and Egypt, among other countries). The WHO calculated these estimates through advanced statistical modelling techniques based on data and expert opinions from countries and acknowledged the uncertainty within the data. The final impact metric was selected to be the disability-adjusted life year, or DALY, which represents the total years of life lost to morbidity and the number of years lived with a disability. The methodologies are entirely different, but we re-grouped the World Risk Poll countries as closely as possible with the regions in the WHO study to determine similarities or differences in the rank order of the regions.

Looking at the World Risk Poll results shown in Chart 9.1, people were most likely to say they, or somebody they knew, had experienced serious harm from unsafe food in the Eastern Mediterranean regions, followed closely by Africa and some sub-regions in Latin America. The differences between these regions are not statistically significant. Furthermore, the regions where the WHO estimated a relatively low burden of foodborne diseases, such as Europe, also reported low levels of experience of harm from unsafe food in the World Risk Poll. However, there is one clear difference: Whereas South-East Asia ranked fourth after the Eastern Mediterranean, Africa and parts of Latin America ranked second in the WHO ranking.

As mentioned above, the two metrics measure entirely different variables and are therefore not strictly comparable. These rank order comparisons simply demonstrate that the WHO and World Risk Poll metrics are broadly aligned and that the World Risk Poll supports the efforts to collect data on the safety threat of contaminated food.

Further accurate global data are needed to design more effective interventions to improve food safety globally. The World Risk Poll will continue to study people’s experiences and perceptions of food safety in future waves of the survey, providing further evidence to help understand and address this issue.

15. Note, the regions did not perfectly match because the World Risk Poll did not field in every country included in the WHO research.
Chart 9.1

WHO estimates of the global burden of foodborne disease versus World Risk Poll results on experience of serious harm from food, by WHO sub-region

Survey question: Have you, or someone you personally know, experienced serious harm from any of the following things in the past two years?

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Perceptions of food and water safety compared to experiences of harm

Globally, more than half of adults said they were at least somewhat worried that the food they eat (60%) or the water they drink (51%) will seriously harm them in the next two years. More than half also expected they will be seriously harmed in that time frame by eating or drinking unsafe food (57%) or water (52%). Much smaller — though still sizable, considering the millions they represent — percentages said they had experienced serious harm from eating contaminated food or drinking contaminated water.

Billions of people worldwide were worried about the safety of their food and water.

As discussed in Chapter 3, these three factors — level of worry, perceived likelihood that a threat will cause harm and previous experience of harm — are important factors that shape people’s perceptions of and attitudes toward risks. For most risk sources, including unsafe food and water, the percentage who said they worry about experiencing a specific risk exceeded the percentage who said they experienced serious harm from that hazard.

As mentioned in Chapter 4, the burden of foodborne diseases is not spread equally across the world and is highly related to economic development levels. In particular, low-income and lower-middle-income economies tend to be disproportionately affected, resulting in an estimated loss of productivity because of unsafe food.

Survey question: In general, how worried are you that each of the following things could cause you serious harm? Are you very worried, somewhat worried, or not worried?

Chart 9.2

Percentage who were 'very worried' about being harmed by unsafe food or water, by country income group

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Very worried food</th>
<th>Very worried water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>24%</td>
<td>28%</td>
</tr>
<tr>
<td>Lower-middle income</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>High income</td>
<td>16%</td>
<td>13%</td>
</tr>
</tbody>
</table>


19 Ibid.
These same patterns were apparent in people’s perceived likelihood that they would be seriously harmed in the next two years and in the percentages who reported that they or someone they knew had experienced serious harm from unsafe water and food. Chart 9.3 shows that the proportion of people in low-income and lower-middle-income economies who believed it was ‘very likely’ they would be seriously harmed by the food they eat was slightly higher than in high-income countries. This difference was even sharper when considering the likelihood of being seriously harmed by drinking water, further demonstrating the clear relationship between past experience and perceived likelihood discussed in Chapter 3.

**Chart 9.3**

Perceived likelihood of experiencing harm compared to the percentage who have experienced harm from unsafe food or water in the past two years, by country income group

- **Food you eat**
  - Low income: 19% very likely, 27% harm experienced
  - Lower-middle income: 19% very likely, 21% harm experienced
  - Upper-middle income: 14% very likely, 15% harm experienced
  - High income: 10% very likely, 13% harm experienced

- **Water you drink**
  - Low income: 24% very likely, 31% harm experienced
  - Lower-middle income: 19% very likely, 21% harm experienced
  - Upper-middle income: 13% very likely, 10% harm experienced
  - High income: 8% very likely, 6% harm experienced

Survey question: Have you, or someone you personally know, experienced serious harm from any of the following things in the past two years?

How likely do you think it is that each of the following things could cause you serious harm in the next two years? Is it very likely, somewhat likely, or not likely at all?
As Chart 9.4 shows, people in Southern Africa, Latin America/Caribbean, Southern Europe, Eastern Asia and Eastern Europe were significantly more likely (by a difference of five percentage points or more) to express worry about being harmed by unsafe food than to have experienced harm from it. Globally, worry about unsafe food was most widespread in Southern Africa, followed by Latin America/Caribbean.

Conversely, people in the Middle East and Northern Africa reported significantly higher rates (by a difference of five percentage points or more) of having experienced serious harm from unsafe food than worry about it. In Eastern Africa, this gap stands at four percentage points, with 29% saying they or somebody they know have experienced harm from the food they eat, while 25% say they were ‘very worried’ about encountering this type of harm in the next two years. These results should be further explored to better understand the drivers for the gap in perception of risk, and to empower people to take action to deal with the risk from unsafe food.

Survey question: In general, how worried are you that each of the following things could cause you serious harm? Are you very worried, somewhat worried, or not worried?

Have you, or someone you personally know, experienced serious harm from any of the following things in the past two years?
Experience and trust in sources of information

As discussed in Chapter 4, at the global level, more than three in 10 people (31%) said they would trust information about food safety from their families and friends most, 22% would most trust medical professionals and 15% said they would trust the government agency responsible for food safety most. A similar pattern emerged among those who have experienced serious harm from eating food in the past two years.

Past experience with unsafe food and water did not change who people trusted for information about food safety.

<table>
<thead>
<tr>
<th>% Friends or family</th>
<th>% Medical professionals</th>
<th>% Government food agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-8 years education</td>
<td>37</td>
<td>22</td>
</tr>
<tr>
<td>9-15 years education</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>16+ years education</td>
<td>21</td>
<td>20</td>
</tr>
</tbody>
</table>

Women, by age

<table>
<thead>
<tr>
<th>Age 15-29</th>
<th>Age 30-49</th>
<th>Age 50-64</th>
<th>Age 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>32</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td>25</td>
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</tr>
<tr>
<td>14</td>
<td>15</td>
<td>13</td>
<td>12</td>
</tr>
</tbody>
</table>

Men, by age

<table>
<thead>
<tr>
<th>Age 15-29</th>
<th>Age 30-49</th>
<th>Age 50-64</th>
<th>Age 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>30</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>21</td>
<td>22</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>13</td>
<td>16</td>
<td>17</td>
<td>16</td>
</tr>
</tbody>
</table>

Survey question: Considering the sources of information you would access, which one would you trust MOST to provide information about food safety?
Rating government performance on food and drinking water safety

The World Risk Poll has been used to create a scorecard on how well people thought their governments were performing in key areas of safety before the COVID-19 pandemic.

Globally, large majorities of people felt their governments were doing a good job of ensuring the water they drink (68%) and the food that they buy (64%) are safe. However, the picture was different across different countries and regions in the world. The following section looks in more detail at the regions of the world where confidence was lowest.

Governments with poor ratings on food safety

As shown in Chart 9.6, people around the world varied greatly in their assessment of their government’s ability to keep the food they buy safe. Although most people in Northern America and Northern/Western Europe said their governments were doing a good job of keeping their food safe, a notable 35% and 40%, respectively, in each region said they were not. In Northern/Western Europe, these figures were driven by the results in France, where 58% of people did not believe their government was doing a good job keeping the food they buy safe.

Chart 9.6

World map: Percentage who said the government does not do a good job on food safety

2% 70%

Top 3
Lebanon 70%
Iraq 66%
Romania 65%

Bottom 3
United Arab Emirates 6%
Rwanda 5%
Singapore 2%

Survey question: In general, in your opinion does the government do a good job ensuring that the following are safe, or not — the food you buy?
Attitudes in France could at least partly be associated with the press attention that food safety standards received in 2019, including a fraud trial early in the year involving meat traders and beef fraud. Additionally, most people in France also lacked confidence in their national government in 2019, with just 40% saying they trusted their leadership.

Notably, nearly half of the people in Latin America/Caribbean, Southern Europe and the Middle East gave their governments poor marks on food safety. Eastern Europe was the only region where more than half of people (52%) said their governments were not doing a good job of keeping the food they buy safe, and only slightly more than one in three people (35%) said their government was doing a good job in this regard. The poor ratings in Eastern Europe were not necessarily driven by personal experience with food/water safety problems — only 17% of people in that region said they have experienced serious harm from the food they eat or water they drink in the past two years. However, the ratings could be related to people’s low confidence in their national institutions within the region, which is explored in the Government Safety Performance Index discussion later in this chapter.

People in Eastern Europe were most likely to rate their governments’ performance on food safety poorly.

Eastern Europe was the only region where more than half of people (52%) said their governments were not doing a good job of keeping the food they buy safe, and only slightly more than one in three people (35%) said their government was doing a good job in this regard.

The poor ratings in Eastern Europe were not necessarily driven by personal experience with food/water safety problems — only 17% of people in that region said they have experienced serious harm from the food they eat or water they drink in the past two years. However, the ratings could be related to people’s low confidence in their national institutions within the region, which is explored in the Government Safety Performance Index discussion later in this chapter.
Data from Gallup’s World Poll show that across Eastern Europe, the median confidence in national governments stood at 31% in 2019 (see Chart 9.7). Among those who said they were confident in their national government, 58% also said they thought their government was doing a good job on food safety. Conversely, among those lacking confidence in their national government, 30% gave their government positive ratings on food safety.

**Chart 9.7**

Relationship between confidence in government and food safety in Eastern Europe

Survey question: In general, in your opinion does the government do a good job ensuring that the food you buy is safe, or not?
Ukraine & Romania: The lowest ratings for government food safety performance

Eastern Europe is home to the two countries that gave their governments the lowest ratings on food safety of any of the 142 countries and territories surveyed: Ukraine and Romania. Only 24% of people in these countries said their governments were doing a good job of keeping their food safe. These results are unsurprising, as each of these two countries has struggled to bring their food safety standards up to the level of their trade partners in the European Union.

Additionally, people in Ukraine and Romania generally lacked faith in their national governments: Only 37% of Ukrainians had confidence in their national government; the figure was even lower in Romania, at 16%.

New partnership to help Ukraine close gaps in food safety.

Governments with poor ratings on water safety

Northern Africa (48%) and Eastern Europe (44%) were the only regions where less than half of the population thought their government was doing a good job of keeping the water they drink safe. The findings for Northern Africa coincide with the region being home to some of the most water-stressed countries in the world, including Tunisia, Morocco, Libya, and Algeria — where complaints about water quality and access have led to public protests.

Chart 9.8 shows that most people in Egypt, Libya and Algeria said their respective governments were doing a good job, but regional results in Northern Africa were driven by Tunisia (35%) and Morocco (35%), where confidence was lower.

Chart 9.8
World map: Percentage who said the government does not do a good job keeping drinking water safe

Survey question: In general, in your opinion does the government do a good job ensuring that the following are safe, or not — the water you drink?


Like food safety, water quality also remained a major issue for people in many Eastern European countries. In Ukraine, for example, where people gave their government one of the lowest ratings in the world on this measure (26%), the FAO recently noted that drinking water quality is ‘an important environmental problem in both rural and urban areas’. In Russia, where 41% of adults said their government does a good job of keeping their water safe, there are no federal laws on drinking water and drinking water supplies.

Climate change, increasing water scarcity, population growth and urbanisation are already stressing the world’s food and water supply systems. With half of the world’s population expected to live in water-stressed areas within the next five years, governments everywhere need to find solid strategies to manage their resources. They will also need their people to support these strategies and act together on solutions.

The Government Safety Performance Index

Governments in every country use a wide range of regulations, laws or codes to help keep people safe. The World Risk Poll survey includes three questions that ask people whether they think their governments are doing a good job of keeping them safe in three key areas of infrastructure: the food people buy, the water they drink and the power lines in the areas where they live. Power lines are included because a safe and consistent electricity supply is central to the operation of many other elements of critical infrastructure, such as food refrigeration and water filtration.

Confidence in national institutions was tied to perceptions of government safety performance.

Scoring the Government Safety Performance Index (GSPI)

The GSPI uses a simple scoring system for each of the three items. For each question, people who said ‘yes’ were coded 1; people who provided any other answer, including ‘no’, ‘don’t know’ or ‘refused’, were coded 0.

Individual results were averaged, summarised to the country level and multiplied by 100 to aid interpretation. A country’s average score could range between 0 (no one said the government was doing a good job) and 100 (everybody believed the government was doing a good job).


25. Ibid.


27. Ibid.

28. Note: If the GSPI were retooled to focus exclusively on how people rate their government’s performance in ensuring the safety of the food they eat and the water they drink, most countries would still score similarly. However, a few countries, such as Chad, Ethiopia and Mozambique would score higher, reflecting the greater lack of confidence people have in their government’s ability to ensure the safety of power lines compared to that of food or water.
Government Safety Performance Index results

Overall, 140 of the 142 countries and territories included in the World Risk Poll received a GSPI score. Among these 140 countries, the median GSPI score was 62. In 35 countries, the GSPI score was below 50, indicating widespread lack of confidence in those countries’ government safety performance. Twenty-nine countries registered a GSPI score of 75 or higher, suggesting most people living in these countries approve of their government’s performance.

Countries with high trust in government safety performance

Singapore and the United Arab Emirates posted the highest GSPI scores in the world, each with a score of 93. Singapore frequently appears at the top of several Gallup World Poll indices that capture the strength of the country’s institutions. For example, Singapore has topped Gallup’s Law and Order Index for the past five consecutive years. Of the 10 countries that score the lowest on the GSPI (see Chart 9.9), EU member states Croatia and Romania perform poorly. People in both countries also lack confidence in their government: Just 29% of Croatians and 16% of Romanians said they had confidence in their national government in 2019, according to the Gallup World Poll.

Chart 9.9

Highest and lowest scores on the Government Safety Performance Index

<table>
<thead>
<tr>
<th>Top 10 countries</th>
<th>Bottom 10 countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singapore</td>
<td>Croatia</td>
</tr>
<tr>
<td>UAE</td>
<td>Gabon</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Venezuela</td>
</tr>
<tr>
<td>Philippines</td>
<td>Mauritania</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Ukraine</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Romania</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Iraq</td>
</tr>
<tr>
<td>Rwanda</td>
<td>Lebanon</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Afghanistan</td>
</tr>
<tr>
<td>Sweden</td>
<td>Yemen</td>
</tr>
</tbody>
</table>

Survey question: In general, in your opinion does the government do a good job ensuring that the following are safe, or not — the food you buy, the water you drink, and power lines in the city or area where you live?

---

29 In two countries, Saudi Arabia and Turkmenistan, the government-related items were considered too sensitive for Gallup to ask.
30 The Law and Order Index measures security levels that respondents report. It incorporates four questions that gauge respondents’ sense of personal security. Higher scores on this index indicate that more residents report feeling secure. Questions included in the index are:
   • In the city or area where you live, do you have confidence in the local police force? (WP112)
   • Do you feel safe walking alone at night in the city or area where you live? (WP113)
   • Within the last 12 months, have you had money or property stolen from you or another household member? (WP117)
   • Within the past 12 months, have you been assaulted or mugged? (WP118)
31 The exact wording of this Gallup World Poll question: ‘Do you have confidence in each of the following, or not? How about the national government?’
GSPI scores varied by country and among individuals. Two broad categories of factors scores: macro-, country-level conditions such as economic development levels, and individual characteristics such as people's education level, gender and feelings about household income.

The country in which people reside is a critical factor in understanding why people expressed different levels of confidence in their government's safety performance. Individual ratings of how well a government is functioning in safety-related issues are shaped, to some degree, by the economic, political or cultural context of the society in which they live. People's feelings about their government's safety performance were also linked to broader feelings about their governing institutions. World Risk Poll results show that factors such as a country's overall economic wealth (GDP) partly shaped people's perceptions of how well their government was faring in keeping their food, water and power lines safe.

However, people's attitudes and personal backgrounds play an even larger role. The following factors were found to be relevant in predicting how a person felt about their government's safety performance:

- People who were concerned about the safety of their water — more so than food or power lines — gave their government lower-than-average safety performance ratings.
- Social trust and GSPI were linked.
- People who felt less financially secure also felt that their government was not doing a good job keeping them safe.

Overall, the analysis suggests that the factors mentioned above played a role in how people perceived and rated their government's performance in keeping their basic needs (food, water and power lines) safe. Understanding what factors are associated with those perceptions would help authorities understand what people's main concerns are, and where the delivery of those services could be improved.

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32 For more details, see the Methodology report.
Chapter 10: Forecasting risk

As the world grapples with the COVID-19 crisis, many organisations, governments and researchers are using statistical models to forecast what will happen in the two areas most and economic outcomes.

For example, in its March 2020 report, the Organisation for Economic Co-operation and Development (OECD) revised its estimates of global economic growth for 2020, projecting annual global GDP growth to drop to 2.4% in 2020 and recover to 3.3% in 2021. Subsequently, the International Monetary Fund's (IMF) April 2020 World Economic Outlook predicted a much deeper recession, estimating the global economy would shrink by 3% in 2020, before expanding by 5.8% in 2021.

Forecasts such as these help businesses and governments plan and allocate resources. However, because COVID-19's effects will not be limited to health and the economy, policymakers would also benefit from forecasts in other areas, including how people think and feel about the risks they face daily and their feelings of safety.

This chapter details the results from a forecasting experiment conducted to explore what risk and safety perceptions could look like in the next two years. In this exercise, we attempted to predict the outcomes on five key measures from the 2019 World Risk Poll: perceptions of safety compared to five years ago, experience of workplace injuries, the Worry Index, the Experience of Harm Index and the perception gaps discussed in Chapter 3.

The experiment used data and analyses from the World Risk Poll as well as data from secondary sources, such as the World Bank and the IMF. The forecasts combine nearly 6,000 country-level time series over three scenarios for projections risk and safety perceptions: a central scenario, an optimistic scenario and a pessimistic scenario.

Forecasts such as these help businesses and governments plan and allocate resources. limited to health and the economy, policymakers including how people think and feel about the risks they face daily and their feelings of safety.

This chapter details the results from a forecasting and safety perceptions could look like in the 2019 World Risk Poll: perceptions of gaps discussed in Chapter 3.

Key predictions

1. Perceptions of safety are likely to get worse in the next two years. Under a ‘worst-case’ scenario, the percentage of people across 127 countries and territories who say they feel ‘less safe’ could be as high as 40% — up from 24% in 2019. Safety perceptions may partially or entirely recover by 2021.

2. People in parts of the world hard hit by COVID-19 will probably feel less safe. High-income economies and regions Southern Europe and Northern America, in perceived safety.

3. Latin America and the Caribbean may be the worst hit in terms of general feelings of safety. At the regional level, people in Latin America and the Caribbean may be the most likely to feel less safe in 2020.

4. Harm and worry will rise minimally. The percentage of people who experience harm from various risks may increase only minimally, from 16% in 2019 to 17% in 2020 under the central forecasting scenario, and up to 19% under a pessimistic scenario. The percentage of people who worry about being harmed by various risks will also increase slightly.

5. Work injuries are likely to inch upward. The percentage of people expected to report that they or someone they work with have been injured at work over the past two years could increase minimally, from 40% in 2019 to 42% in 2020 under the central forecasting scenario, edging up to 44% under the pessimistic scenario.

Insights into the next two years

- Perceptions of safety are likely to get worse in the next two years. Under a ‘worst-case’ scenario, the percentage of people across 127 countries and territories who say they feel ‘less safe’ could be as high as 40% — up from 24% in 2019. Safety perceptions may partially or entirely recover by 2021.

- People in parts of the world hard hit by COVID-19 will probably feel less safe. High-income economies and regions Southern Europe and Northern America, in perceived safety.

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Main research questions and topics

- What are the main factors that may predict safety and risk perceptions and experiences of harm from selected risks?

Forecasting risk — a note of caution

The absence of a global time series on risk and safety perceptions prior to the World Risk Poll means that the behaviour of these measures over time is not yet known. It is possible, for example, that risk and safety perceptions are relatively stable within countries, irrespective of changes to the environment.

The precise impact of the COVID-19 pandemic and its associated effect on risk perceptions is still difficult to forecast, especially given the uncertainties related to the nature of the disease itself and potential government responses.

While the forecasting model incorporates the expected impact of COVID-19 on the economy, labour markets, mortality rates and tourism, the pandemic may have other social, economic and psychological effects not captured in the model. For example, it is expected that mental health issues, domestic violence and other types of injuries will increase, which would suggest a larger effect on the experience of harm over the period.

In addition to the COVID-19 crisis, other sources of upside and downside risk may affect the forecasts, particularly at the individual country level.

The reliance on a regression model based on one year of data, and estimation (or extrapolation) using forecasts of predictors introduces two additional sources of uncertainty. Both the regression model and the predictor forecasts are estimates and thus subject to uncertainty.

Independent variables that may explain changes in the concept of interest, e.g., in perceptions of safety.

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World Risk Poll questions analysed

- #1. The forecasting exercise attempts to predict five measures, or outcomes, included in the survey, two of which are the indices discussed in Chapter 3. These outcomes of the forecasting model are:

1) Perceptions of safety compared to five years ago (question 1 in table 10.1)
2) The Worry Index (an aggregated measure based on question 2)
3) The Experience of Harm Index (or the Experience Index — an aggregated measure based on question 3)
4) The perception gap (Worry Index minus Experience Index)
5) Experience of workplace injuries (an aggregated measure based on question 4)

Table 10.1

World Risk Poll questions — 'outcomes' included in the forecast analysis

- A. The food you eat
- B. The water you drink
- C. Household appliances, such as a washing machine, dryer or refrigerator
- D. Physical harassment or violence
- E. Tripping or falling

---

5 See Chapter 3 for how the index was constructed.
6 See Chapter 3 for how the index was constructed.
7 See Chapter 3 for how perception gap was calculated.
We selected these measures as outcomes because they are broadly representative of the thematic areas included in the World Risk Poll. People's overall perceptions of safety are measured as the percentage of people who feel 'less safe' in each country compared to f1 4 -+-$p$. #4/-&N #4. /" use the 'less safe' response option because our models were more accurate when using this option, compared with the 'more safe' or 'about as safe' response options.

Perceptions of risk and safety are also largely based on how worried people feel about being harmed by particular hazards. This -"$/).#$s+.+/- 4/# *-4) 3 (see Chapter 3).

Brief methodological approach

The detailed forecasting approach is described in the Methodology report. In summary, the approach involved four major steps:

1) Identifying predictors: A predictor is a variable that we believe has a relationship with the outcome in which we are interested. For example, we are interested in forecasting the trends in how safe people feel compared with the recent past. 'Feelings of safety' are, therefore, the outcome we will forecast. From the research and the findings discussed in Chapters 1 and 2, we know that 'feelings of safety' are associated with income levels and other personal data from sources such as the World Bank to identify factors that have a theoretical and/or statistically significant relationship with the five outcomes we investigated.

2) Specifying scenarios: We specified three scenarios — 'optimistic,' 'central' and 'pessimistic' — for those predictors with a high likelihood of COVID-19 impact, relying on the latest authoritative projections from the IMF or UN agencies.

3) Projecting predictors: We projected the predictors into 2020 and 2021 for each scenario, using either existing authoritative projections or time series analysis.

4) Estimating outcomes: The projections of the predictors were finally used to estimate outcomes for the World Risk Poll questions for 2020 and 2021 under the three scenarios. For the World Risk Poll questions for 2020 and 2021 under the three scenarios.

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The precise nature of the impact of COVID-19 on the 14 predictors is extremely uncertain and conditional on the course of the pandemic and the actions governments may take in response. Economic outcomes\(^8\) and health and economic outcomes\(^8\) are particularly significant. We, therefore, expect that predictors associated with mortality rates, GDP growth, unemployment and tourism will show the largest impacts.

We attempted to quantify the effect of uncertainty by incorporating forecasts from secondary data sources for these indicators, including GDP growth and unemployment forecasts from the IMF, tourism forecasts from the United Nations World Tourism Organisation (UNWTO) and Trading Economics — mortality rate forecasts produced by Gallup using excess mortality statistics compiled by The Economist.\(^9\)

We considered three scenarios to incorporate the effect of uncertainty on forecasts. These scenarios represent average changes at the global level, but changes in individual countries may be larger or smaller:

### Central scenario
- **GDP growth**: Recession in 2020 (-1.4%), followed by strong recovery in 2021 (+6.2%)
- **Unemployment rate**: 7.6% in 2020 and 6.8% in 2021
- **Tourism**: 70% drop in international arrivals in 2020, relative to 2018 (the latest year with data available for most countries)
- **Mortality rates**: 10% increase in mortality over 2019

### Optimistic scenario
- **GDP growth**: Stagnation in 2020 (0.1%), followed by moderately strong recovery in 2021 (+5.0%)
- **Unemployment**: 6.1% in 2020 and 5.4% in 2021
- **Tourism**: 60% drop in international arrivals in 2020, relative to 2018
- **Mortality rates**: 5% increase in mortality over 2019

### Pessimistic scenario
- **GDP growth**: Depression in 2020 (-4.1%), followed by weak recovery in 2021 (+2.7%)
- **Unemployment**: 9.1% in 2020 and 8.2% in 2021
- **Tourism**: 80% drop in international arrivals in 2020, relative to 2018
- **Mortality rates**: 15% increase in mortality over 2019

These scenarios are summarised in Chart 10.1.

---


Chart 10.1

GDP growth, unemployment rate, tourism and mortality rate scenarios for 2020 and 2021

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP growth (% change, YoY)</th>
<th>Unemployment (%)</th>
<th>Tourism (international arrivals, in millions)</th>
<th>Mortality (per 1,000 people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>5.0</td>
<td>6.4</td>
<td>1,353</td>
<td>7.5</td>
</tr>
<tr>
<td>2019</td>
<td>6.2</td>
<td>5.6</td>
<td>1,196</td>
<td>7.9</td>
</tr>
<tr>
<td>2020</td>
<td>3.6</td>
<td>5.6</td>
<td>1,152</td>
<td>7.8</td>
</tr>
<tr>
<td>2021</td>
<td>2.7</td>
<td>6.1</td>
<td>1,139</td>
<td>7.7</td>
</tr>
</tbody>
</table>

2018 and 2019 figures are recorded. 2020 and 2021 figures are forecasted.
Main forecasting results

Forecasts under the three scenarios were produced for 127 countries and territories, representing approximately 5 billion adults aged 15 and older.

Following is a summary of the main results for each of the five outcomes:

1) The World Risk Poll question, or outcome, most likely to be affected by the COVID-19 crisis is perceptions of safety compared to five years ago.

In 2019, the World Risk Poll data show that 24% of adults in the 127 countries included in the forecast exercise reported feeling less safe compared to five years before. The forecast suggests that these levels are expected to worsen significantly in 2020, with 32% of the population expected to feel ‘less safe’ under the central scenario and as many as 40% under the pessimistic scenario.

The effects of the COVID-19 crisis would be relatively smaller under an optimistic scenario, with an uptick to 28% in 2020, followed by complete recovery by 2021.

2) We do not anticipate large increases in the Experience of Harm Index score under any of the three scenarios. Experience of Harm would increase only slightly from 16 points in 2019 to 17 in 2020 under the central scenario, and up to 19 under the pessimistic scenario. The index would only increase by one point under an optimistic scenario.

3) Likewise, we do not anticipate large increases in the Worry Index score under any of the three scenarios. Worry would increase between 2019 and 2020 by about one point in the central scenario and two in the pessimistic scenario. The index would be virtually unchanged under an optimistic scenario.

4) Given that both the Experience of Harm Index and the Worry Index are expected to move in tandem under all scenarios, no major changes are expected to the perceptions gap.

5) Finally, the proportion of people who report having been injured or knowing someone who had been injured at work over the last two years is predicted to increase from 40% in 2019 to 42% in 2020 under the central scenario, and to 44% under the pessimistic scenario. The change would be very small under the optimistic scenario.

10 Fifteen countries out of the total 142 countries in the World Risk Poll lacked sufficient data from secondary data sources to produce a forecast.
This pattern of results in the forecasts showing (0#/.#*/%)/*- *%/ +/%)/*! safety than the other questions can be 3+$/ 4/#+#(+%+/#)/*!/#+ $%/ - model for each outcome (see Table 10.3).

Perceptions of safety are strongly associated 2$/#-#*2#/%. #+/ -sqO) 0.

"+2/#$, 3+/ /% *!/# $%/*.-(% / 4/#c+ crisis, so will perceptions of safety.

3+ $% 4-()$ .

are mostly determined by risks that are ' . / 4/#c#+$ $.N # components of those indices include unsafe food, unsafe water, violent crime, severe weather events, household appliances, electrical power lines and mental health issues. However, it is worth noting that some

- . - . #. 3+(()#/%. #$.O .O including post-traumatic stress symptoms, confusion and anger, to rise because of c#/ 

It is also possible that there is a

.3+$/2-$Y$%$-.$&.O.$%$(.+$/ injuries, including from household appliances and domestic violence, because of prolonged c#/.$%/*%&*$2).

The statistical analysis conducted for this 3- $. f./#/2#-&+ $%/$- strongly associated with fertility rates, population growth rates, the Law and Order 3()%1 -( )/$/1 ).. 3

f$%/$-./#/ )% / 3+ / 1-4

(-(3$%4-%) 4-#/#) 3/N

People in high-income economies are more likely to see a larger increase in the proportion of people who feel less safe compared with low-income economies. The former group

$3+ //% $. 1-($)$.%$/%#/+ in 2020, before declining again to 28% in 2021. However, in absolute terms, people in low-income economies will feel least safe, 2$/#/13+ /% - +$.%! $% in 2020, up from 38% in 2019.


https://www.thelancet.com/journals/lancet/article/ PIIS0140-6736(20)30460-8/fulltext

Regions that will have the largest increases in perceptions of feeling less safe

A regional assessment of the central scenario for perceptions of safety suggests that the impacts will be broadly distributed, with the largest increase in people’s perceptions that they feel less safe in Southern Europe and Americas. Regions that will have the largest increases in perceptions of feeling less safe will be likely to occur in most regions of the world.

Regions where people will feel least safe

The percentage of the population reporting feeling less safe in the Northern America will increase from 26% in 2019 to 40% in 2020. (See Chart 10.4.)

The percentage of people reporting feeling less safe, from 31% in 2019 to 45% in 2020, declining to 29% in 2021.


### Chart 10.4

#### 2020-2021 safety perceptions forecast, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Africa</td>
<td>37</td>
<td>51</td>
<td>54</td>
</tr>
<tr>
<td>Latin America &amp; Caribbean</td>
<td>40</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Eastern Africa</td>
<td>42</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Central/Western Africa</td>
<td>38</td>
<td>40</td>
<td>46</td>
</tr>
<tr>
<td>Northern Africa</td>
<td>32</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Middle East</td>
<td>25</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Southern Europe</td>
<td>31</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Northern/Western Europe</td>
<td>28</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Southern Asia</td>
<td>28</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Northern America</td>
<td>26</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Australia &amp; New Zealand</td>
<td>23</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>21</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Central Asia</td>
<td>20</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Southeastern Asia</td>
<td>14</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>8</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Survey question: Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

Country-level projections are likely to be more volatile, given the high levels of uncertainty involved in forecasting individual country indicators.
Appendices
Appendix 1: Lloyd’s Register Foundation World Risk Poll Questionnaire

1. When you hear the word RISK, do you think more about opportunity or danger?

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity</td>
</tr>
<tr>
<td>Danger</td>
</tr>
<tr>
<td>(Both)</td>
</tr>
<tr>
<td>(Neither)</td>
</tr>
<tr>
<td>(DK)</td>
</tr>
<tr>
<td>(Refused)</td>
</tr>
</tbody>
</table>

Opportunity: 1
Danger: 2
(Both): 3
(Neither): 4
(DK): 98
(Refused): 99

2. Overall, compared to five years ago, do you feel more safe, less safe, or about as safe as you did five years ago?

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>More safe</td>
</tr>
<tr>
<td>Less safe</td>
</tr>
<tr>
<td>About as safe</td>
</tr>
<tr>
<td>(DK)</td>
</tr>
<tr>
<td>(Refused)</td>
</tr>
</tbody>
</table>

More safe: 1
Less safe: 2
About as safe: 3
(DK): 98
(Refused): 99

3.1A. In your own words, what is the greatest source of RISK TO YOUR SAFETY in your daily life?

Write in: 
### 3.1B Code respondent’s verbatim response using the list of pre-coded options below. Refer to previous screen for verbatim.

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Road-related accidents/injuries (such as using a bicycle, car, motorbike, truck, van, bus, etc.)</td>
<td>1</td>
</tr>
<tr>
<td>Other transportation-related accidents/injuries (such as subway, train, plane, etc.)</td>
<td>2</td>
</tr>
<tr>
<td>Crime/violence/terrorism</td>
<td>3</td>
</tr>
<tr>
<td>Cooking or other household accidents/injuries</td>
<td>4</td>
</tr>
<tr>
<td>Financial: not having enough money to pay for the things you need</td>
<td>5</td>
</tr>
<tr>
<td>Economy-related, such as unemployment, high prices</td>
<td>6</td>
</tr>
<tr>
<td>Politics/political situation/corruption</td>
<td>7</td>
</tr>
<tr>
<td>Internet/technology-related risks</td>
<td>8</td>
</tr>
<tr>
<td>Health: personal health condition/illness</td>
<td>9</td>
</tr>
<tr>
<td>Health: drugs, alcohol, smoking</td>
<td>10</td>
</tr>
<tr>
<td>Water supply or drinking unclean water</td>
<td>11</td>
</tr>
<tr>
<td>Food-related: eating unsafe, contaminated food</td>
<td>12</td>
</tr>
<tr>
<td>Pollution</td>
<td>13</td>
</tr>
<tr>
<td>Work-related accidents: physical injuries</td>
<td>14</td>
</tr>
<tr>
<td>Mental stress/exhaustion</td>
<td>15</td>
</tr>
<tr>
<td>Climate change, natural disasters or weather-related events (such as floods, drought, wildfires, etc.)</td>
<td>16</td>
</tr>
<tr>
<td>Drowning</td>
<td>17</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
</tr>
<tr>
<td>Nothing/no risks</td>
<td>19</td>
</tr>
<tr>
<td>Don’t know</td>
<td>98</td>
</tr>
<tr>
<td>Refused</td>
<td>99</td>
</tr>
</tbody>
</table>

### 3.2A Other than what you just mentioned, in your own words, what is another MAJOR source of RISK TO YOUR SAFETY in your daily life?

(INTERVIEWER: Capture verbatim response) (Allow ONE response)

Write in: ________________________________
### 3.2B (Please code respondent’s verbatim response using the list of pre-coded options below. Refer to previous screen for verbatim.)

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road-related accidents/injuries (such as using a bicycle, car, motorbike, truck, van, bus, etc.)</td>
</tr>
<tr>
<td>Other transportation-related accidents/injuries (such as subway, train, plane, etc.)</td>
</tr>
<tr>
<td>Crime/violence/terrorism</td>
</tr>
<tr>
<td>Cooking or other household accidents/injuries</td>
</tr>
<tr>
<td>Financial: not having enough money to pay for the things you need</td>
</tr>
<tr>
<td>Economy-related, such as unemployment, high prices</td>
</tr>
<tr>
<td>Politics/political situation/corruption</td>
</tr>
<tr>
<td>Internet/technology-related risks</td>
</tr>
<tr>
<td>Health: personal health condition/illness</td>
</tr>
<tr>
<td>Health: drugs, alcohol, smoking</td>
</tr>
<tr>
<td>Water supply or drinking unclean water</td>
</tr>
<tr>
<td>Food-related: eating unsafe, contaminated food</td>
</tr>
<tr>
<td>Pollution</td>
</tr>
<tr>
<td>Work-related accidents: physical injuries</td>
</tr>
<tr>
<td>Mental stress/exhaustion</td>
</tr>
<tr>
<td>Climate change, natural disasters or weather-related events (such as floods, drought, wildfires, etc.)</td>
</tr>
<tr>
<td>Drowning</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Nothing/no risks</td>
</tr>
<tr>
<td>Don't know</td>
</tr>
<tr>
<td>Refused</td>
</tr>
</tbody>
</table>
4. Please tell me whether you think each of the following will mostly HELP or mostly HARM people in this country in the next 20 years. If you don’t have an opinion about this, please just say so.

Please think about how you understand this issue. If you don’t have an opinion about this, please just say so.

<table>
<thead>
<tr>
<th>Mostly help</th>
<th>Mostly harm</th>
<th>Don’t have opinion</th>
<th>(Neither)</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L4A</td>
<td>Genetically-modified food</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>L4B</td>
<td>The use of nuclear power for electricity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>L4C</td>
<td>Machines or robots that can think and make decisions, often known as artificial intelligence</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

5. Do you think that climate change is a very serious threat, a somewhat serious threat, or not a threat at all to the people in this country in the next 20 years? If you don’t know, please just say so.

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very serious threat</td>
<td>1</td>
</tr>
<tr>
<td>Somewhat serious threat</td>
<td>2</td>
</tr>
<tr>
<td>Not a threat at all</td>
<td>3</td>
</tr>
<tr>
<td>(DK)</td>
<td>98</td>
</tr>
<tr>
<td>(Refused)</td>
<td>99</td>
</tr>
</tbody>
</table>
6. In general, how WORRIED are you that each of the following things could cause you serious harm? Are you very worried, somewhat worried, or not worried?

<table>
<thead>
<tr>
<th></th>
<th>Very worried</th>
<th>Somewhat worried</th>
<th>Not worried</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L6A</td>
<td>The food you eat</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L6B</td>
<td>The water you drink</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L6C</td>
<td>Violent crime</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L6D</td>
<td>Severe weather events, such as floods or violent storms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L6E</td>
<td>Electrical power lines</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L6F</td>
<td>Household appliances, such as a washing machine, dryer or refrigerator</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L6G</td>
<td>Mental health issues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
</tbody>
</table>

7. How LIKELY do you think it is that each of the following things COULD cause you serious harm in the next TWO years? Is it very likely, somewhat likely, or not likely at all?

<table>
<thead>
<tr>
<th></th>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Not likely at all</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L7A</td>
<td>The food you eat</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L7B</td>
<td>The water you drink</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L7C</td>
<td>Violent crime</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L7D</td>
<td>Severe weather events, such as floods or violent storms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L7E</td>
<td>Electrical power lines</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L7F</td>
<td>Household appliances, such as a washing machine, dryer or refrigerator</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
<tr>
<td>L7G</td>
<td>Mental health issues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
</tr>
</tbody>
</table>
8. Have you or someone you PERSONALLY know EXPERIENCED serious harm from any of the following things in the past TWO years?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L8A Eating food</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L8B Drinking water</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L8C Violent crime</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L8D Severe weather events, such as floods or violent storms</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L8E Electrical power lines</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L8F Household appliances, such as a washing machine, dryer or refrigerator</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L8G Mental health issues</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
</tbody>
</table>

9. How likely do you think it is that any of the following things could happen to you in the next TWO years? Please use a scale from 0 to 10, where 0 means it is 'not likely at all' and 10 means it is 'very likely.' You can use any number from 0 to 10.

<table>
<thead>
<tr>
<th></th>
<th>Not likely at all</th>
<th>Very likely</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L9A Being in a traffic accident (If necessary, READ: This includes any roadside accident that could occur while being on a bike, walking by a road, or being in a car, bus, etc.)</td>
<td>00 01 02 03 04 05 06 07 08 09 10</td>
<td>98 99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L9B Being physically attacked by someone</td>
<td>00 01 02 03 04 05 06 07 08 09 10</td>
<td>98 99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L9C Being in an airplane accident</td>
<td>00 01 02 03 04 05 06 07 08 09 10</td>
<td>98 99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L9D Drowning</td>
<td>00 01 02 03 04 05 06 07 08 09 10</td>
<td>98 99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L9E Being struck by lightning</td>
<td>00 01 02 03 04 05 06 07 08 09 10</td>
<td>98 99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. In general, do you wear a seatbelt if you are in a motorized vehicle and one is available?

<table>
<thead>
<tr>
<th></th>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
</tr>
<tr>
<td>(DK)</td>
<td>98</td>
</tr>
<tr>
<td>(Refused)</td>
<td>99</td>
</tr>
</tbody>
</table>

11. Are you able to swim without any assistance at all?

<table>
<thead>
<tr>
<th></th>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
</tr>
<tr>
<td>(DK)</td>
<td>98</td>
</tr>
<tr>
<td>(Refused)</td>
<td>99</td>
</tr>
</tbody>
</table>

12. Do you think that 10% is bigger than 1 out of 10, smaller than 1 out of 10, or the same as 1 out of 10? If you do not know, please just say so.

<table>
<thead>
<tr>
<th></th>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% is bigger than 1 out of 10</td>
<td>1</td>
</tr>
<tr>
<td>10% is smaller than 1 out of 10</td>
<td>2</td>
</tr>
<tr>
<td>10% is the same as 1 out of 10</td>
<td>3</td>
</tr>
<tr>
<td>(DK)</td>
<td>98</td>
</tr>
<tr>
<td>(Refused)</td>
<td>99</td>
</tr>
</tbody>
</table>
### 13. Suppose you wanted to find out if the food you eat is safe. Would you look to any of the following sources for information, or not?

<table>
<thead>
<tr>
<th>Source</th>
<th>Yes</th>
<th>No</th>
<th>(Does not apply)</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L13A Friends or family</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L13B Medical professionals, such as your local doctor or nurse</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L13C Newspapers, television or radio</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L13D The internet/social media</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L13E Agency for Food, Environmental and Occupational Health and Safety</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L13F The packaging or label on the food</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L13G A famous person you like</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L13H Local religious leaders</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
</tbody>
</table>

(If code 1 'yes' to ANY in L13A-L13H, continue; otherwise, skip to L15)

### 14. Considering the sources of information you would access, which one would you trust MOST to provide information about food safety?

<table>
<thead>
<tr>
<th>Source</th>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends or family</td>
<td>1</td>
</tr>
<tr>
<td>Medical professionals, such as your local doctor or nurse</td>
<td>2</td>
</tr>
<tr>
<td>Newspapers, television or radio</td>
<td>3</td>
</tr>
<tr>
<td>The internet/social media</td>
<td>4</td>
</tr>
<tr>
<td>Agency for Food, Environmental and Occupational Health and Safety</td>
<td>5</td>
</tr>
<tr>
<td>The packaging or label on the food</td>
<td>6</td>
</tr>
<tr>
<td>A famous person you like</td>
<td>7</td>
</tr>
<tr>
<td>Local religious leaders</td>
<td>8</td>
</tr>
<tr>
<td>Would trust none of them</td>
<td>9</td>
</tr>
<tr>
<td>Some other source</td>
<td>10</td>
</tr>
<tr>
<td>Don’t know</td>
<td>98</td>
</tr>
<tr>
<td>Refused</td>
<td>99</td>
</tr>
</tbody>
</table>
15. In general, do you think the government should require businesses to adopt safety procedures and rules, or not?

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>(DK)</td>
</tr>
<tr>
<td>(Refused)</td>
</tr>
</tbody>
</table>

16. In general, in your opinion does the government do a good job ensuring that the following are safe, or not?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L16A The food you buy</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L16B The water you drink</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L16C Powerlines in the city or area where you live</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
</tbody>
</table>

17. Suppose you lost a small bag that contained items of great financial value to you that had your name and address written on it. If it were found by each of the following people, in general, how likely is it that it would be returned to you with all of its contents? (Read 1-3)

<table>
<thead>
<tr>
<th></th>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Not likely at all</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L17A A neighbor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L17B A stranger</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L17C The police</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>98</td>
<td>99</td>
</tr>
</tbody>
</table>
18. How likely do you think it is that you could be injured while working in the next TWO years?

<table>
<thead>
<tr>
<th>Not likely at all</th>
<th>Very likely</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 01 02 03 04 05</td>
<td>06 07 08 09</td>
<td>10</td>
<td>98 99</td>
</tr>
</tbody>
</table>

19. Have you EVER been seriously injured while working?

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>(DK)</td>
</tr>
<tr>
<td>(Refused)</td>
</tr>
</tbody>
</table>

20. Are any of the following a source of risk to your personal safety WHILE YOU ARE WORKING?

<table>
<thead>
<tr>
<th>L20A Operating equipment or heavy machinery</th>
<th>Yes</th>
<th>No</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L20B Fire</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L20C Exposure to chemicals or biological substances</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L20D Physical harassment or violence</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L20E Tripping or falling</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
</tbody>
</table>
21. Have you or has anyone you work with experienced injury or harm from any of the following WHILE WORKING in the past TWO years?

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Yes</th>
<th>No</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L21A Operating equipment or heavy machinery</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L21B Fire</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L21C Exposure to chemicals or biological substances</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L21D Physical harassment or violence</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L21E Tripping or falling</td>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
</tbody>
</table>

22. Do you agree or disagree with the following statement? You are free to report any safety problems you notice to your employer without fear of punishment.

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>98</td>
<td>99</td>
</tr>
</tbody>
</table>

23. Other than yourself, who do you feel is MOST responsible for your safety while you are working? (Read 1-3)

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>CIRCLE ONE RESPONSE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your employer</td>
<td>1</td>
</tr>
<tr>
<td>The trade or labour union</td>
<td>2</td>
</tr>
<tr>
<td>The government</td>
<td>3</td>
</tr>
<tr>
<td>(No one else is responsible)</td>
<td>4</td>
</tr>
<tr>
<td>(DK)</td>
<td>98</td>
</tr>
<tr>
<td>(Refused)</td>
<td>99</td>
</tr>
</tbody>
</table>
24. Do you think each of the following CARE about your safety while you are working, yes or no? If the person or group does not apply to you, please say so.

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Does not apply</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L24A Your co-workers</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L24B Your boss or supervisor</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>L24C The trade or labour union</td>
<td>1</td>
<td>2</td>
<td>97</td>
<td>98</td>
<td>99</td>
</tr>
</tbody>
</table>

25. Do you think the safety rules at your place of work are a good thing to have or do they make your job more difficult to do?

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A good thing</td>
<td>1</td>
</tr>
<tr>
<td>Make your job more difficult to do</td>
<td>2</td>
</tr>
<tr>
<td>(Both)</td>
<td>3</td>
</tr>
<tr>
<td>(Does not apply/No safety rules at work)</td>
<td>97</td>
</tr>
<tr>
<td>(DK)</td>
<td>98</td>
</tr>
<tr>
<td>(Refused)</td>
<td>99</td>
</tr>
</tbody>
</table>

26. Have you used the internet, including social media, in the past 30 days?

<table>
<thead>
<tr>
<th>CIRCLE ONE RESPONSE:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
</tr>
<tr>
<td>(DK)</td>
<td>98</td>
</tr>
<tr>
<td>(Refused)</td>
<td>99</td>
</tr>
</tbody>
</table>
27. When using the internet or social media, do you worry about any of the following things happening to you?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>(DK)</th>
<th>(Refused)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L27A</td>
<td>Online bullying, such as someone sending you a hateful message or comment through social media</td>
<td>1</td>
<td>2</td>
<td>98</td>
</tr>
<tr>
<td>L27B</td>
<td>Receiving false information, such as news or information which is not true</td>
<td>1</td>
<td>2</td>
<td>98</td>
</tr>
<tr>
<td>L27C</td>
<td>Fraud, such as someone stealing your bank information or your money</td>
<td>1</td>
<td>2</td>
<td>98</td>
</tr>
</tbody>
</table>
Appendix 2: References

Introduction


Chapter 1


Ibarra, A. B., & Byanyima, W. (2016). Latin America is the world’s most unequal region. Here’s how to fix it. World Economic Forum. #/+/PvV222N2 !-0*(N+-.v"/v$"(#v"#v$",0/"$/s".c" //"$)"c2*-.c$c0"c$c0-c.c#-c.c# 2c*cf3c$v


Keating, E., & Reinhart, R. (2020, February 20). Hong Kongers' confidence in institutions damaged in unrest. Gallup.com. #/+/PvV2 2.N**0+N*(v4v*vs0#v#0v#)c6*).-+.f)$.s/0/)$.c0-c0-.N+3


// -f 'ON N O -*ON NN O!*1$ON ps"" & QN $-$($/$/$*O10') -$x$/4/$O0)0/$/$O #! *-$& N Risk Analysis, 2a1(1), 115-129.


Chapter 2


**Chapter 3**


Centers for Disease Control and Prevention. (n.d.). *If the material uses numeric probability to describe risk, is the probability also explained with words or a visual?* https://www.cdc.gov/ccindex/tool/page-20.html


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Chapter 4


Chapter 5


OSH in figures: Young workers - Facts and figures [European Risk Observatory report]. p5**qN $ !* $*$ O' $*$). of the European Communities. #/+Pvvv.* .N 0.* +N 0v l+v+0'/($*$).v- +4-./c*. #cf0-.c4*0)'.c2*-$ & .-cl/c)c f°-... 


Chapter 6


National climate change policy. (n.d.). The Ministry of the Environment, Finland. #/+/P.vv4( N f v) f*"c0 .c4

National climate change policy. (n.d.). The Ministry of the Environment, Finland. #/+/P.vv4( N f v) f*"c0 .c4

NASA. (n.d.). The effects of climate change. Retrieved August 5, 2020, from #/+/P.vv4( N f v) f*"c0 .c4


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Hu, X., Neupane, B., Flores-Echaiz, L., Sibal, P., & Rivera Lam, M. (2019). Steering AI and advanced ICTs for knowledge societies: A ROAM perspective. UNESCO. #//+Pv v0 N0.*N*-v.4./ (v/+ .v0).+c./ -$/m$1m*-m&*)2* M.*$ / N


Chapter 8


Disinformation and propaganda — impact on the functioning of the rule of law in the EU and its member states. (2019, -0-4qN**$4 +/-( )/!$-+/5$). W $"#/!$+$)/$0/5$+ $-$.r("$N*(& $N http://aei.pitt.edu/97042/1/disinformation_and_propaganda.pdf


Rizza, C., & Guimarães Pereira, Â. (2013). *Social networks and cyber-bullying among teenagers*. [https://www.researchgate.net/publication/264310203_Social_networks_and_Cyber-0*-4S)m(*m/m 1* -mms 1f$m m+* $/m m+*](https://www.researchgate.net/publication/264310203_Social_networks_and_Cyber-0*-4S)m(*m/m 1* -mms 1f$m m+* $/m m+*)


**Chapter 9**


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Chapter 10


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## Appendix 3: Regions

### World Health Organization (WHO) Member States, by sub-region

<table>
<thead>
<tr>
<th>Region</th>
<th>Member States</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR D</td>
<td>Algeria; Angola; Benin; Burkina Faso; Cameroon; Cape Verde; Chad; Comoros; Equatorial Guinea; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Liberia; Madagascar; Mali; Mauritania; Mauritius; Niger; Nigeria; Sao Tome and Principe; Senegal; Seychelles; Sierra Leone; Togo</td>
</tr>
<tr>
<td>AFR E</td>
<td>Botswana; Burundi; Central African Republic; Congo; Côte d'Ivoire; Democratic Republic of the Congo; Eritrea; Ethiopia; Kenya; Lesotho; Malawi; Mozambique; Namibia; Rwanda; South Africa; Swaziland; Uganda; United Republic of Tanzania; Zambia; Zimbabwe</td>
</tr>
<tr>
<td>AMR A</td>
<td>Canada; Cuba; United States of America</td>
</tr>
<tr>
<td>AMR B</td>
<td>Antigua and Barbuda; Argentina; Bahamas; Barbados; Belize; Brazil; Chile; Colombia; Costa Rica; Dominica; Dominican Republic; El Salvador; Grenada; Guyana; Honduras; Jamaica; Mexico; Panama; Paraguay; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Suriname; Trinidad and Tobago; Uruguay; Venezuela (Bolivarian Republic of)</td>
</tr>
<tr>
<td>AMR D</td>
<td>Bolivia (Plurinational State of); Ecuador; Guatemala; Haiti; Nicaragua; Peru</td>
</tr>
<tr>
<td>EMR B</td>
<td>Bahrain; Cyprus; Iran (Islamic Republic of); Jordan; Kuwait; Lebanon; Libyan Arab Jamahiriya; Oman; Qatar; Saudi Arabia; Syrian Arab Republic; Tunisia; United Arab Emirates</td>
</tr>
<tr>
<td>EMR D</td>
<td>Afghanistan; Djibouti; Egypt; Iraq; Morocco; Pakistan; Somalia; South Sudan; Sudan; Yemen</td>
</tr>
<tr>
<td>EUR A</td>
<td>Andorra; Austria; Belgium; Croatia; Czech Republic; Denmark; Finland; France; Germany; Greece; Iceland; Ireland; Israel; Italy; Luxembourg; Malta; Monaco; Netherlands; Norway; Portugal; San Marino; Slovenia; Spain; Sweden; Switzerland; United Kingdom</td>
</tr>
<tr>
<td>EUR B</td>
<td>Albania; Armenia; Azerbaijan; Bosnia and Herzegovina; Bulgaria; Georgia; Kyrgyzstan; Montenegro; Poland; Romania; Serbia; Slovakia; Tajikistan; The Former Yugoslav Republic of Macedonia; Turkey; Turkmenistan; Uzbekistan</td>
</tr>
<tr>
<td>EUR C</td>
<td>Belarus; Estonia; Hungary; Kazakhstan; Latvia; Lithuania; Republic of Moldova; Russian Federation; Ukraine</td>
</tr>
<tr>
<td>SEAR B</td>
<td>Indonesia; Sri Lanka; Thailand</td>
</tr>
<tr>
<td>SEAR D</td>
<td>Bangladesh; Bhutan; Democratic People's Republic of Korea; India; Maldives; Myanmar; Nepal; Timor-Leste</td>
</tr>
<tr>
<td>WPR A</td>
<td>Australia; Brunei Darussalam; Japan; New Zealand; Singapore</td>
</tr>
<tr>
<td>WPR B</td>
<td>Cambodia; China; Cook Islands; Fiji; Kiribati; Lao People's Democratic Republic; Malaysia; Marshall Islands; Micronesia (Federated States of); Mongolia; Nauru; Niue; Palau; Papua New Guinea; Philippines; Republic of Korea; Samoa; Solomon Islands; Tonga; Tuvalu; Vanuatu; Viet Nam</td>
</tr>
</tbody>
</table>
## World Risk Poll Report, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Country List</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australia &amp; New Zealand</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Central Asia</strong></td>
<td>Armenia; Azerbaijan; Georgia; Kazakhstan; Kyrgyzstan; Tajikistan; Turkmenistan; Uzbekistan</td>
</tr>
<tr>
<td><strong>Central/Western Africa</strong></td>
<td>Benin; Burkina Faso; Cameroon; Chad; Congo Brazzaville; Gabon; Ghana; Guinea; Ivory Coast; Liberia; Mali; Mauritania; Niger; Nigeria; Senegal; Sierra Leone; Gambia; Togo</td>
</tr>
<tr>
<td><strong>Eastern Asia</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Eastern Africa</strong></td>
<td>Ethiopia; Kenya; Madagascar; Malawi; Mauritius; Mozambique; Rwanda; Tanzania; Uganda; Zambia; Zimbabwe</td>
</tr>
<tr>
<td><strong>Eastern Europe</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Latin America &amp; Caribbean</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Middle East</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Northern/Western Europe</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Northern Africa</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Northern America</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Southeastern Asia</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Southern Asia</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Southern Africa</strong></td>
<td>-</td>
</tr>
<tr>
<td><strong>Southern Europe</strong></td>
<td>-</td>
</tr>
</tbody>
</table>