

RISK PERCEPTION GAPS

**Government risk
communications in Singapore,
South Korea, and China**

WHY FOCUS ON RISK PERCEPTION GAPS?

Project Wavelength is a flagship research project of the Lloyd's Register Foundation Institute for the Public Understanding of Risk (IPUR). The project was launched in 2022 with the aim of understanding and assessing *risk perception* gaps—the extent to which experts and the general public diverge in identifying, assessing, and managing risks. The research is intended to inform and incentivise stakeholders to take action to close the gaps.

This report is the first in a series employing survey data from Singapore, South Korea, and China. Each report highlights a different dimension of public perceptions surrounding everyday risks, including:

- ▶ Whether risk information provided by public authorities is accessible, understandable and relevant to members of the public;
- ▶ Whether individuals see governments, private companies, the media and fellow citizens as giving sufficient attention to risks;
- ▶ Whether current protective actions against risks are perceived as adequate in the eyes of the public.

The insights from this research are intended to help decision-makers develop more effective risk communication strategies and to foster greater risk know-how among individuals.

TEN RISKS:



Infectious diseases



Chronic diseases



Data fraud/theft



Mental health problems



Food safety



Drinking water quality



Violent crime



Environmental pollution



Traffic/roadside accidents



Natural disasters

METHODOLOGY.

Data was collected through online surveys conducted in Singapore, South Korea, and China. Between October to November 2022, over 2,400 individuals shared their views on 10 everyday risks spanning from *health risks* (e.g., chronic diseases, infectious diseases) to *environmental risks* (e.g., climate change, natural hazards) to *technological risks* (e.g., data fraud/theft) and more.

The self-administered survey featured four key sections:

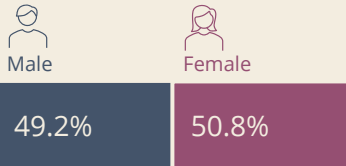
- **Perceptions of risk** pertaining to seriousness of the risk, worry over possible serious harm, likelihood of serious harm, and experience of actual serious harm
- **Perceptions of regulatory authorities, private companies, and the media** in terms of the adequacy of attention given to each risk and the adequacy of protective action taken for each risk
- **Perceptions of the general public** in terms of how informed they are on each risk, the adequacy of attention given to each risk, and the adequacy of protective action taken for each risk
- **Perceptions of experts** in terms of the adequacy of attention given to each risk, the adequacy of protective action taken for each risk, and the perceived agreement between scientists on the protective actions required to reduce the risk for people in their country.

Respondent Profile

Singapore



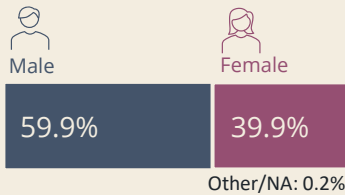
813
respondents
40.9
mean age (years)



South Korea



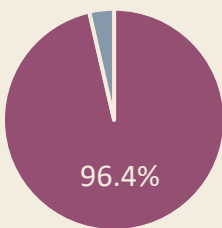
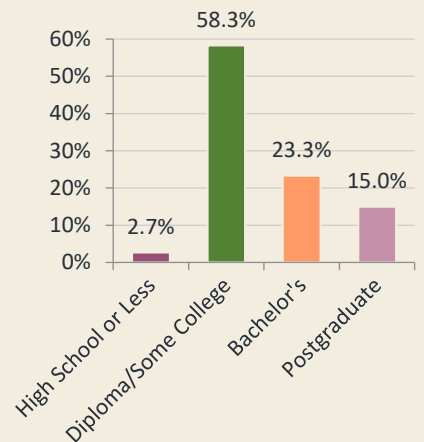
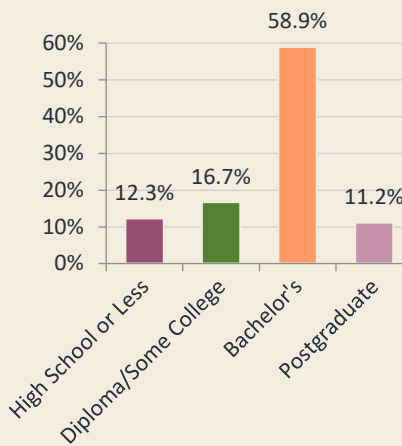
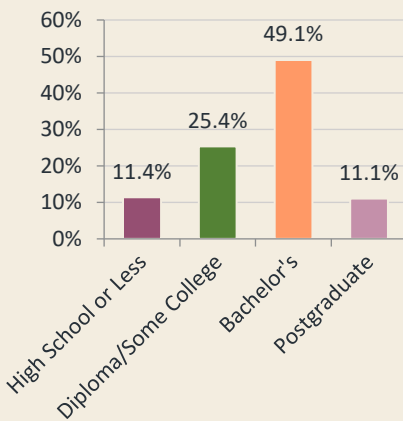
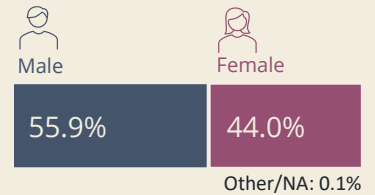
812
respondents
42.4
mean age (years)



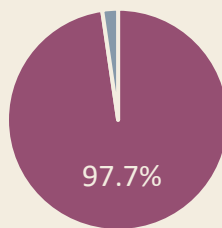
China



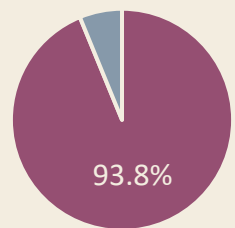
819
respondents
31.5
mean age (years)



■ Asian ■ Other



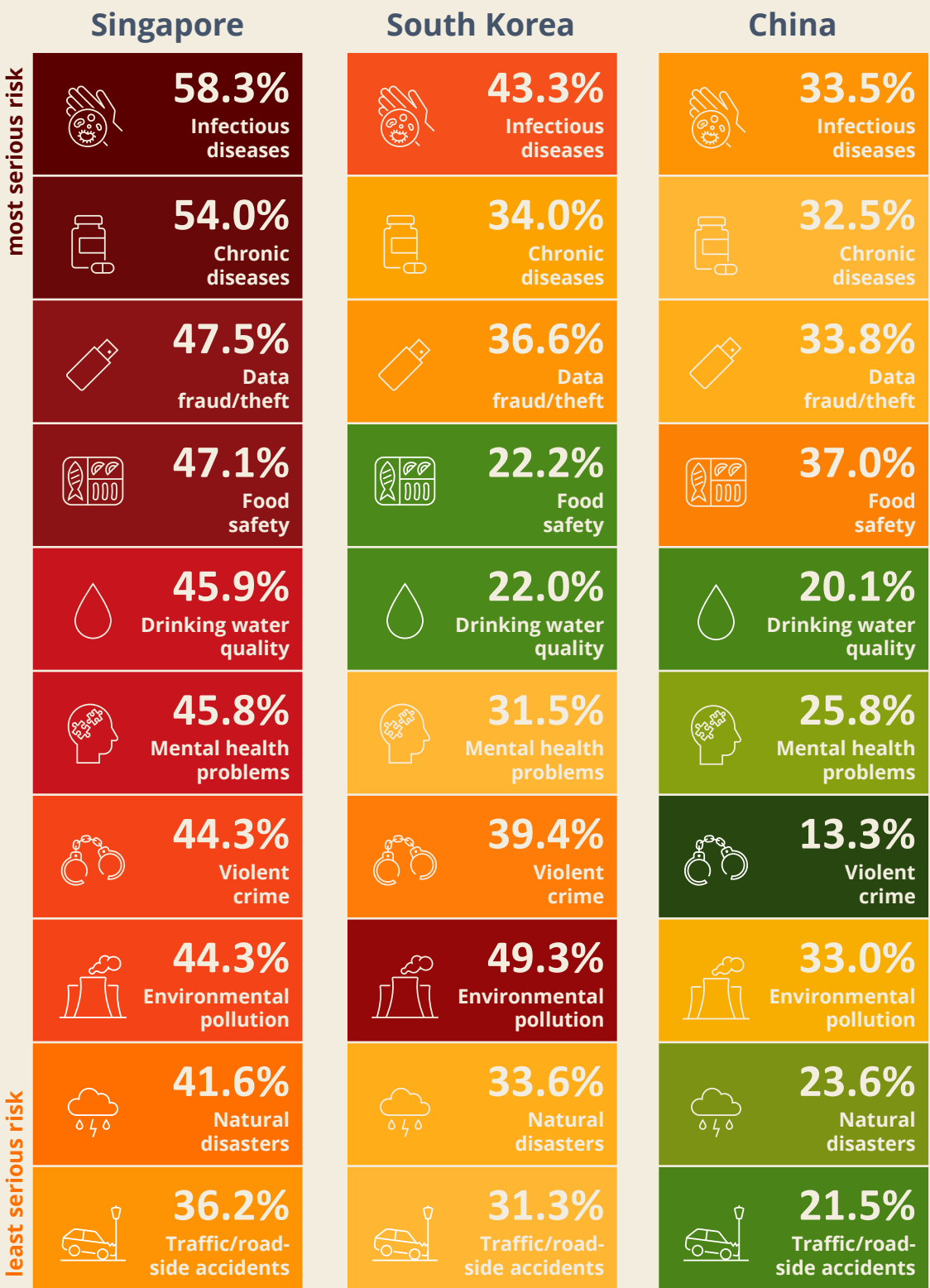
■ Asian ■ Other



■ Asian ■ Other

A quick glance: How serious do people perceive risks to be?

% of respondents who indicated these risks to be “very serious”



Survey question: How serious do you perceive these risks to be?

How do the public in Singapore, South Korea, and China perceive risk communications by their public authorities?

Do governments communicate about the risks that are most **relevant** and important to the public, in ways that people can **understand**?

Survey questions analysed:

- How serious do you perceive these risks to be?
- Do you recall seeing any information from public authorities about these risks in the last 2 years?
- Was the information from public authorities about these risks easy to understand?
- Was the information from public authorities about these risks relevant to you?

Government Risk Communications: Actions

- ▶ Public authorities can do much more to ensure that valid and reliable risk information reaches the public. During the Covid pandemic, governments recognised the critical role of public communications in risk management and demonstrated their commitment and ability to get messages across. However, survey findings indicate that similar efforts to communicate risks are not being made for the top causes of mortality—chronic diseases—or growing health concerns, notably mental health.
- ▶ Public authorities need to also confront the challenge of effectively communicating chronic risks inherent in daily life, such as those pertaining to drinking water quality, food safety, and environmental pollution. The data shows that respondents perceived information about drinking water quality (in all three countries) and environmental pollution (in South Korea) to be less available, and messages that were conveyed seem to be less easily understood.

While effective communication on such chronic risks is difficult given the competing demands on the public's attention, it is of paramount importance. In the absence of relevant and reliable information about these risks, people may make consistently poor decisions, jeopardising their own health and safety. People may also be more susceptible to misinformation, disinformation, and panic.



- ▶ Much more can be done across the board to improve the quality of official risk communications so that key messages are more easily understood and actioned on. Decades of academic studies and experience point to the need for risk communicators to have a deep understanding of their audiences and to design, test and re(calibrate) their communications interventions. Survey results suggest that the communications testing and tailoring process may not be sufficient at present, particularly in relation to mental health issues and data fraud/theft.
- ▶ Good official risk communications can fulfil different objectives: they may help to raise awareness about everyday risks that the public tend to give less attention to, and/or they may help to allay unfounded fears around unknown or dread risks. In all cases, they should be useful and actionable to enable individuals to make informed decisions in the face of risk.
- ▶ Investing in building public trust in risk information pays off. The survey results underline the importance of trust regardless of the risk domain and the type of guidance provided in government communications. When people trust the information from the public authorities, they are more likely to follow the recommendations provided, making risk management less costly and more effective.

1. Access to Official Risk Information

- ▶ In **Singapore**, health risks are the most encountered type of risk in government communications. 79.3% of respondents indicated having come across information about **infectious diseases**, largely driven by Covid-19, followed by 65.6% who had seen information about **chronic diseases**. These also comprised the top two most severe risks in the eyes of Singaporeans. More encouragingly, communications about infectious and chronic diseases seem to be well understood—more than 8 in 10 people found the information from the government on these two risk areas easy to comprehend. However, communications around **mental health** have been less effective in reaching the public. Of the 6 in 10 people who had encountered official risk information on mental health problems, just over 22% either did not find the information easy to understand or weren't sure about their comprehension.
- ▶ **Singapore** respondents were least likely to have come across information about **drinking water quality**. Just 36.8% had seen government information on this risk. This is a surprising finding given the importance of water in Singapore's national development and its positioning as a global water hub. The lack of information on drinking water quality may help to explain why Singapore has the world's highest consumption of bottled water per capita, despite providing reliable, potable tap water. Moreover, less than half of the Singapore population had seen risk information from the government on **natural hazards** or **environmental pollution**; Singaporeans also ranked these risks as comparatively less severe. With less official information about these risks, the general public may infer that the objective levels of these risk are low and therefore be less concerned about them.



- Levels of exposure to government risk communications are lower across the board in **South Korea**, compared to Singapore and China. Infectious diseases stands out as an exception to this, as Covid-19 drove broad and sustained communications campaigns. For other risks, official risk information reached between 28.4% (**mental health**) and 53.4% (**natural hazards**). For **environmental pollution**—rated by South Korean participants to be the most severe risk out of the 10 studied risks—half the respondents stated that they had not come across government information on the issue.

For **chronic diseases** and **data fraud/theft**, the next top-ranked risks for South Koreans after infectious diseases, just 37.4% and 31.3% respectively had come across government information. Furthermore, many of those who had come across the information found it difficult to grasp. 3 in 10 also said they did not find information about **mental health** easy to understand, while a quarter could not easily understand information about **data fraud/theft** or **drinking water quality**.

- Of the three countries covered in our survey, respondents in China were most likely to have encountered official risk information on at least one risk. The proportion was highest for infectious diseases, as would be expected in the context of Covid-19, but was also very high for **natural hazards** and **food safety**, for which more than 7 in 10 had encountered government risk communications.

However, with the clear exception of infectious disease, health appears to be a lower priority in communications efforts: fewer than half of the respondents had seen or heard communications about **chronic diseases** or **mental health** from government sources.

Communication about **drinking water quality** was also scarce—half of the respondents had not encountered official information about this risk.

- Overall, Chinese respondents did not report difficulties in understanding government risk communications. **Natural hazards** showed highest performance on this measure, with 92.9% saying these communications were easy to understand.

Information on **food safety**, **data fraud/theft**, **infectious diseases**, and **environmental pollution**, four risks rated most severe by the Chinese public, was also relatively easy to comprehend: more than 8 in 10 people who had come across information on these risks said they understood it easily. In both China and South Korea, risk information on **mental health** and **data fraud/theft** was reported to be the most difficult to grasp by the public.

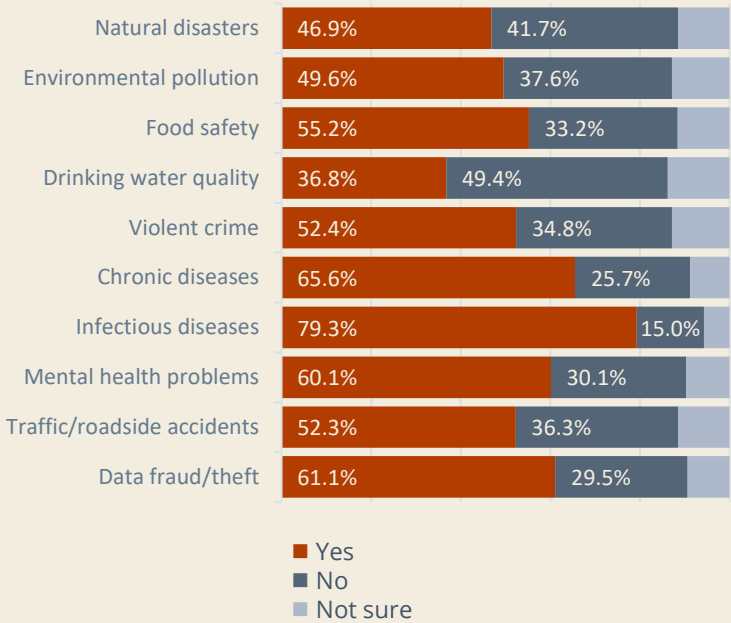
More people in Singapore and China recall seeing risk-related information from their public authorities

On average, over half of the respondents in Singapore and China (55.9% and 65.8% respectively across the 10 risks) recalled seeing information from their public authorities about these risks. Recall of government-disseminated risk information was lower in South Korea, averaging 41.3% across the risks. Notably, less than 30% of respondents from South Korea indicated having seen information pertaining to mental health (28.4%) and drinking water quality (29.2%).

In all three countries, infectious diseases emerged as the top risk for which more of the public had seen information disseminated by their public authorities.

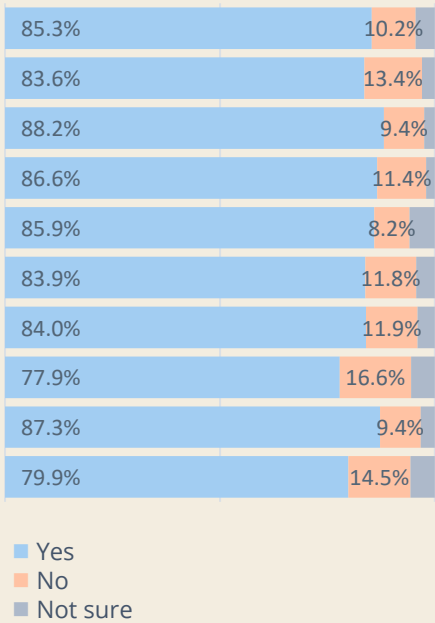
Have seen information from public authorities

Singapore



Survey question: Do you recall seeing any information from public authorities about this risk in the last 2 years?

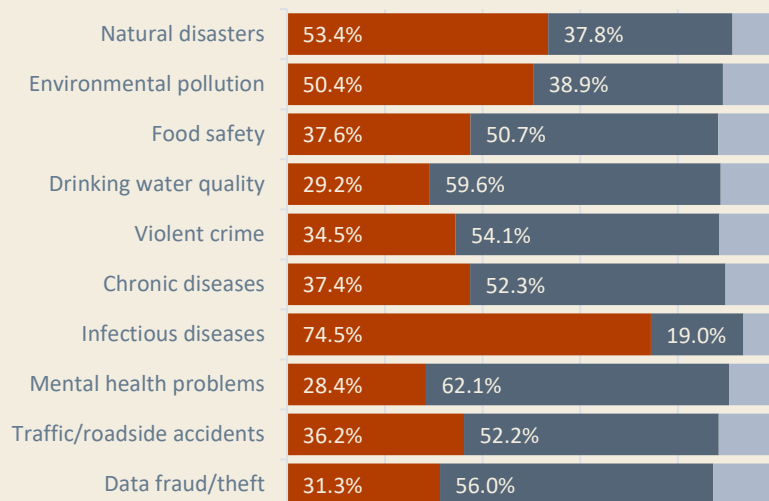
Ease of understanding risk information



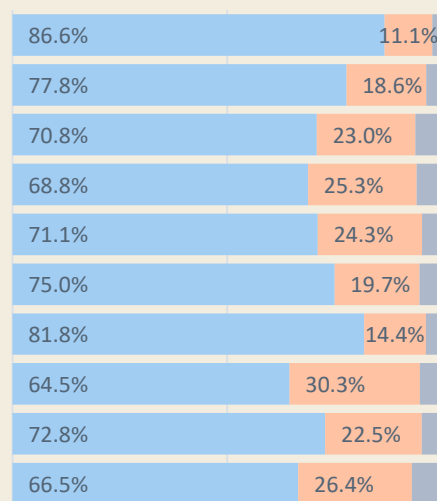
Survey question: Was the information from public authorities about this risk easy to understand?

Have seen information from public authorities

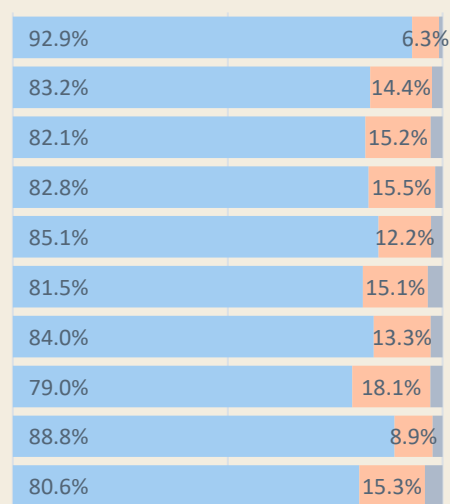
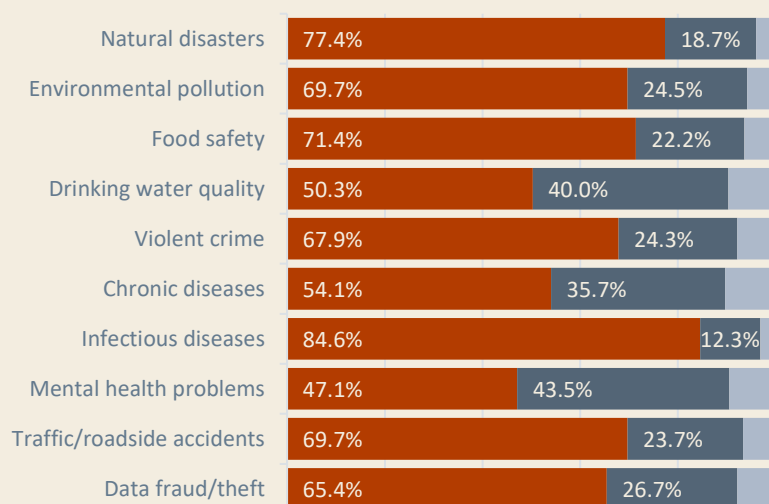
South Korea



Ease of understanding risk information



China

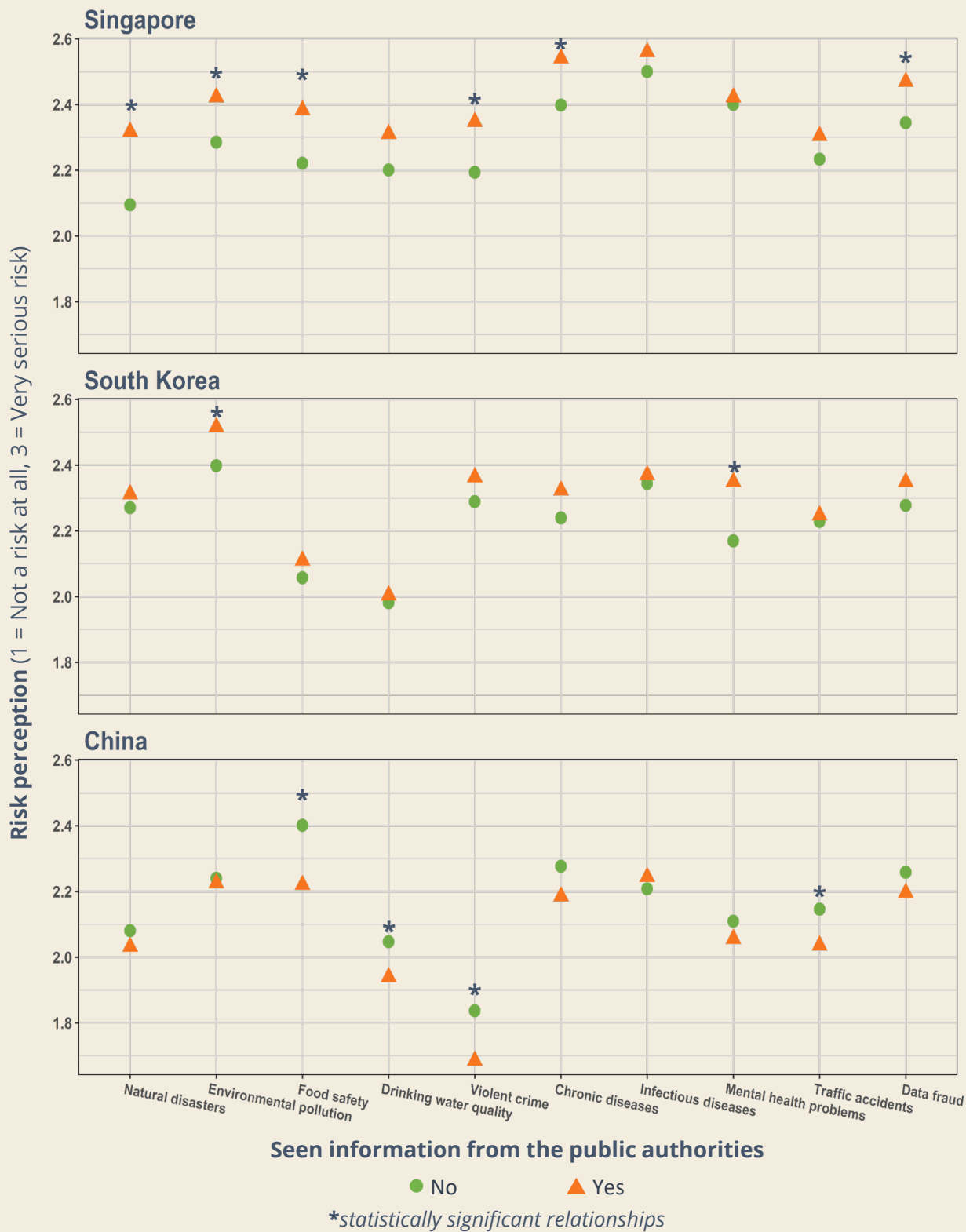


■ Yes
■ No
■ Not sure

■ Yes
■ No
■ Not sure

In all three countries, amongst those who reported having seen information from their public authorities, a significant majority indicated that the information was easy to understand. Nevertheless, across all risks, there were more respondents in South Korea who found the information difficult to understand as compared to respondents in Singapore and China.

In Singapore, encountering government risk-related information is associated with higher perceived risk, but in China it is the opposite: risk information is associated with lower perceived risk.



Encountering risk-related information from public authorities: Allaying fears or attracting attention?

People in Singapore who encountered official information about a risk were significantly more likely to rate it as *severe* compared to those who did not. This pattern was found for six out of the ten risks covered in the study. This relationship suggests that government-communicated information about those risks may draw attention to potential harm, while the absence of government communication pertaining to those risks may be taken by the public as a signal that there is little to be concerned about, akin to the adage, “no news is good news.”

By contrast, people in China who encountered government risk information viewed many of the risks to be significantly *less severe* compared to those who did not have government information. In this case, communications seem to be playing the opposite role to Singapore, contributing to allaying fears rather than raising attention to them.

In South Korea, the pattern looked similar to Singapore but the difference between the group who had seen government information was not statistically significant from those who had not for most of the risks.



Clearly, there is wide variation to the nature and content of information from governments that may account for the observed disparities between countries. At times, information may be motivated to prompt more concern, and to motivate more protective action by individuals. In other circumstances, information may focus more on the actions that government is taking to manage the risk and be directed primarily to reassuring the public.

Nonetheless, our observations suggest that the presence of government-disseminated information on risks may evoke diverse reactions to different publics. In Singapore, government-disseminated risk information tends to prompt greater risk concern. In China, risk-related government information may provide their public more assurance about safety—with possibly the implicit understanding that if their government is talking about it, they are probably doing something about it too. These findings underscore the nuanced impact of government communication on risk perception across distinct societal contexts and risk domains.

2. Understanding Official Risk Information

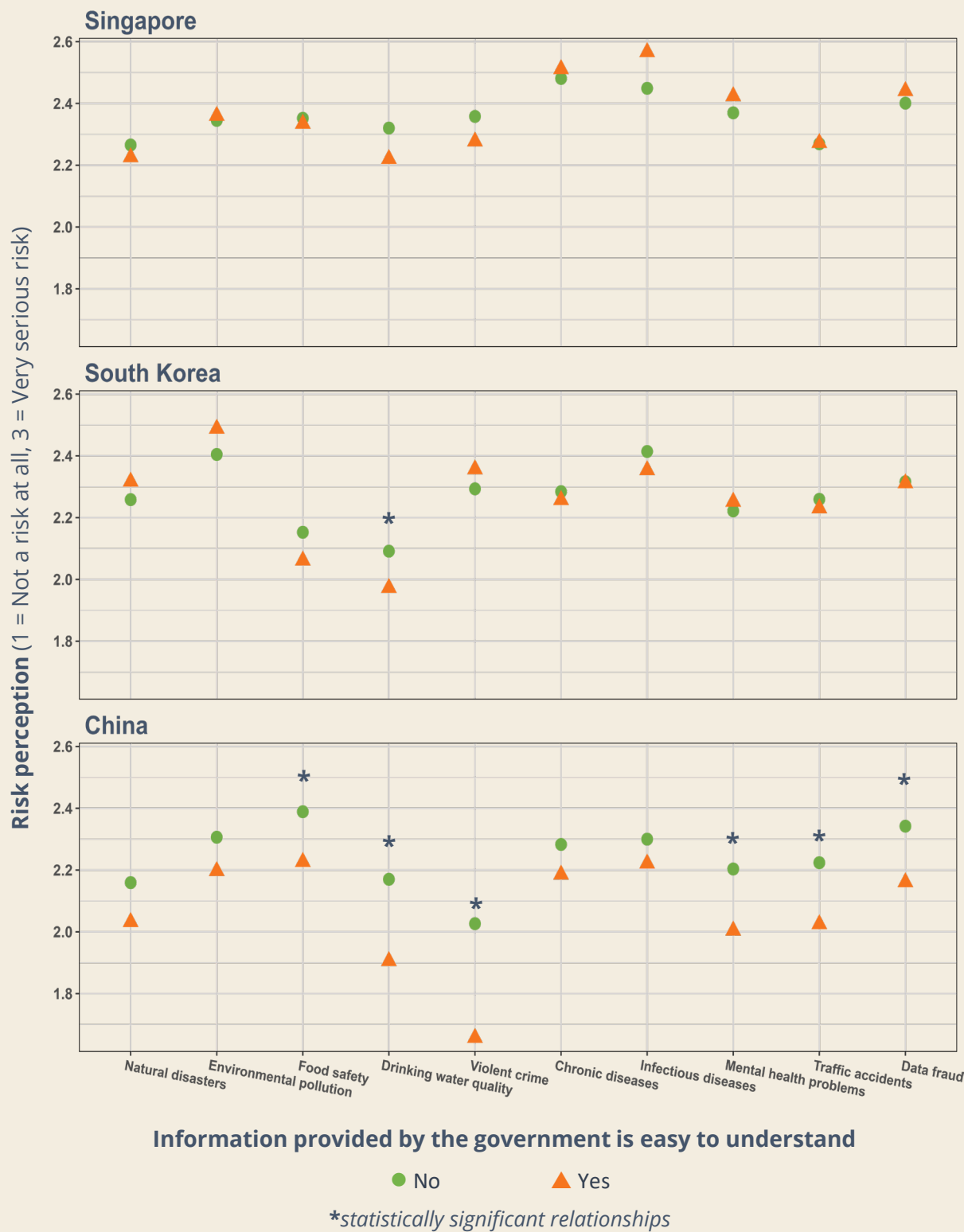
Does having more understandable risk information from the public authorities relate to how the public perceive risks?

The clarity and comprehensibility of government-provided risk information can affect how the public perceive risks. Interestingly, this relationship unfolds differently in different countries. In China, greater difficulty in understanding government-provided risk information seems to be associated with greater risk perception for six of the ten studied risks. This observation suggests that clearer risk information by the government could potentially serve as a means to reduce risk perception among the Chinese public.

However, this dynamic is not observed in Singapore and South Korea. In these two countries, whether government-provided risk information is easy to understand or not does not seem to have much impact on how people perceive the severity of the risks, suggesting that there may be other more pertinent factors that affect their risk perceptions.

The association of comprehensibility of government-provided risk information and the public's perception of risks may depend on many factors such as how knowledgeable the public are about the risks or how severe the public perceive the risks. For example, in China, risks with significant associations between perceived severity and ease of understanding tend to also be risks that the public perceive to be less severe or have less knowledge about, such as violent crime, drinking water quality, or mental health.

More understandable risk information from the authorities is associated with lower public risk perceptions in China



3. Relevance of Official Risk Information

Might having more relevant risk-related information from the public authorities relate to how people perceive risk?

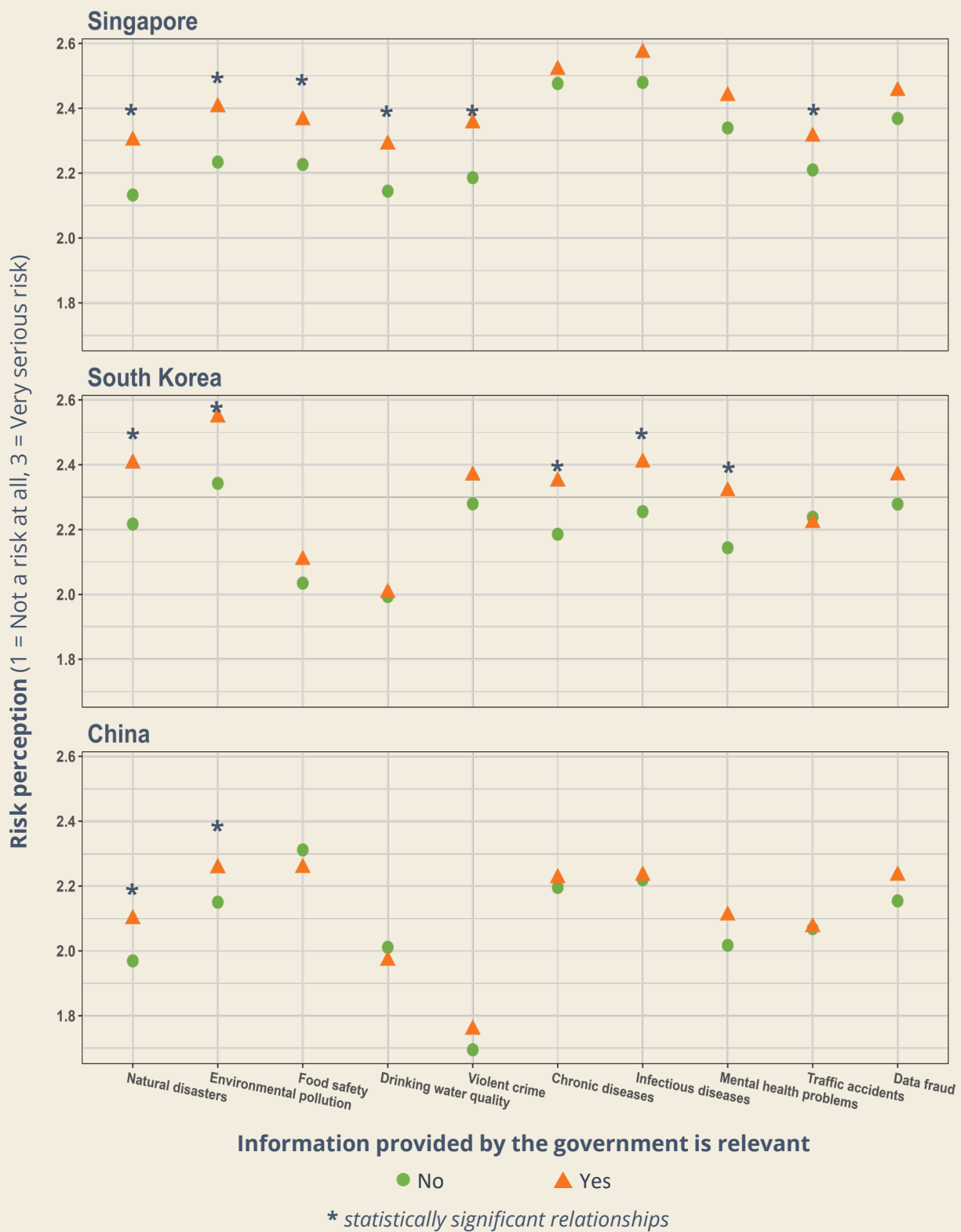
The relationship between government communication and risk perception suggests a dynamic process. Relevant information, by its nature, is more likely to resonate with individuals, making them more attuned to the potential hazards or threats discussed. Consequently, this heightened awareness of risks may contribute to a more pronounced perception of risk severity.

Across most risks, we observed that when government-disseminated risk information is seen to be relevant by the public, the associated risks are generally perceived to be more severe. This pattern is more apparent in Singapore and South Korea, underscoring the pivotal role of informational relevance in shaping and potentially amplifying public risk perception. It is worth noting, however, that a notably lower proportion of people in South Korea view information from their public authorities as being relevant to them (46%) compared to Singapore (65%) and China (64%).

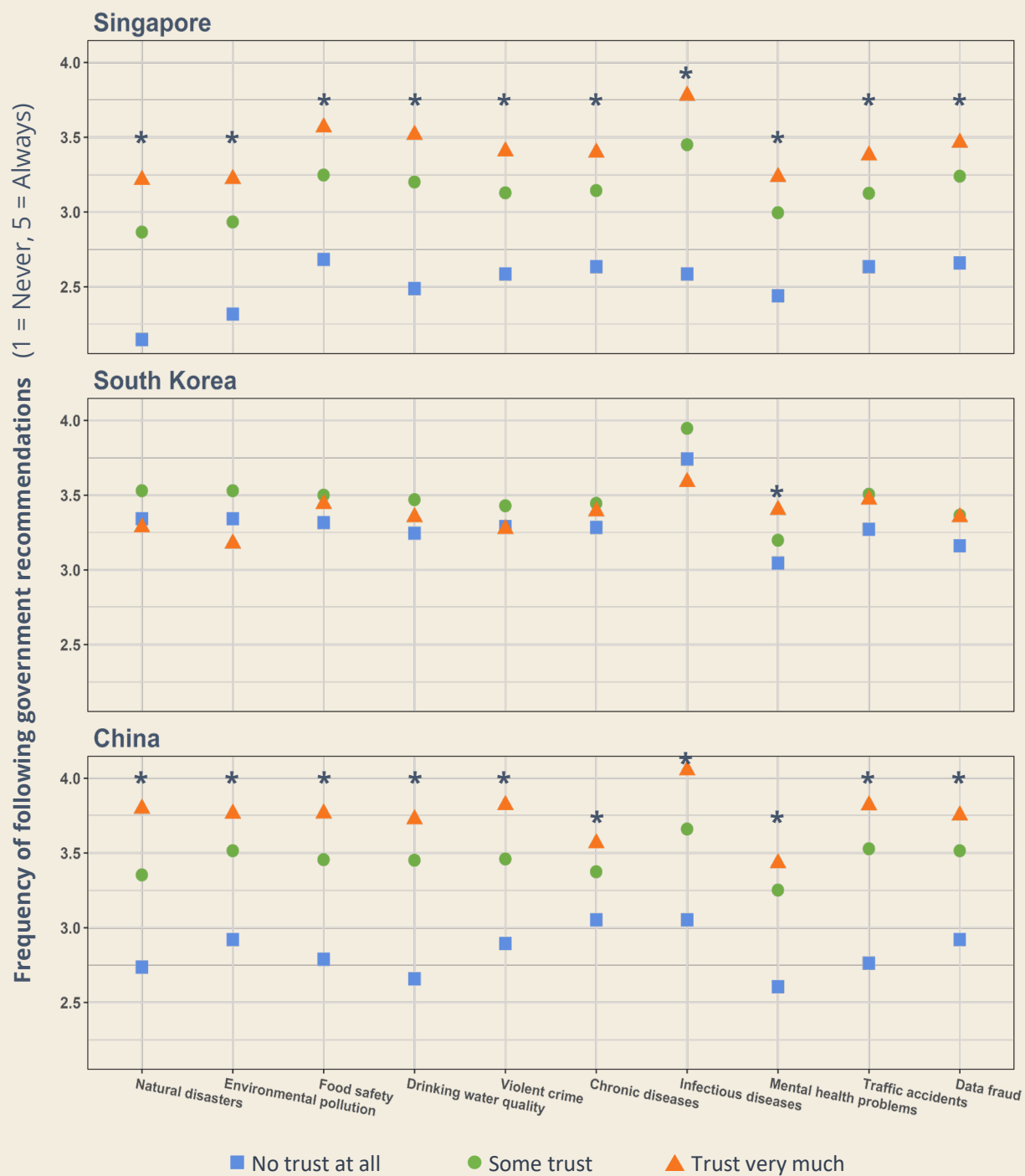
In China, we encounter a less clear-cut relationship between the relevance of governmental information and public risk perceptions. While relevance remains an important factor for a number of risks, risk perception may be more influenced by other factors such as personal experience with the risk or the nature of the risk. For instance, we observe heightened risk perceptions over food safety, chronic diseases, and infectious diseases regardless of whether the information from the government was seen to be relevant or not.

While the relationship between relevant government information and public perceptions of risk severity differs between countries and risks, we observe consistent patterns across all three countries for risks pertaining to natural disasters and environmental pollution. Specifically, the public perceives natural disaster and environmental pollution risks to be more severe when they encounter relevant government information on those risks (as opposed to non-relevant government information). This suggests that increasing the relevance of government communication on natural disasters and environmental pollution risks can serve to amplify perceptions of such risks among the public.

More relevant risk-related information from the public authorities is linked to higher risk perceptions of most risks



In Singapore and China, greater trust in the authorities to provide risk-related information is associated with greater likelihood to adopt government recommendations about the risk.



* statistically significant relationships

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RESOURCES.

Check out these free resources for more information about risk perceptions and risk communications:

- ▶ [IPUR Resources and Tools](#)
- ▶ [IPUR Risk Communication Masterclasses](#)
- ▶ [LRF World Risk Poll](#)
- ▶ [Risk Know-How: Resources for Communities](#)

WHO WE ARE.

The LRF Institute for the Public Understanding of Risk (IPUR) is the premier institute focusing on public risk perception and communication in Asia, a region which faces acute and growing risks relating to public health, the environment, climate change and emerging technologies. We investigate what people are worried about, where the gaps are between the public's understanding of these issues and the experts' risk assessment, and what interventions can help to bridge these gaps.

Launched in 2017, IPUR was established through funding from the Lloyd's Register Foundation and the National University of Singapore. IPUR strives to shed light on some of the most pressing societal matters which are subject to uncertainty. By dedicating ourselves to transform the risk communication landscape and enhance the public understanding of risk, we seek to improve lives with maximum impact.

Our research is multi-disciplinary and brings together social sciences – psychology, economics, public policy, communications, sociology – with marketing, science and engineering. Our research spans three main risk domains: Data and Technology, Environment and Climate, and Health and Lifestyle. We partner with government, industry and academia to design and evaluate intervention measures, train professionals and students, develop resources, and organise outreach events, stakeholder workshops and conferences.

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