cookpad

A Global Analysis of Cooking Around the World
Year 3

A report by Gallup and Cookpad

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YEAR 3

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Introduction

The Gallup and Cookpad home-cooking survey returned in 2020 for the third year. In the midst of a global pandemic, the commitment to understanding how often people around the world cook and eat home-cooked meals remains unchanged. However, the relationship between cooking frequency and the characteristics of home cooks has never been more complex and multilayered than in the midst of ever-changing lockdown measures, disruptions of global food supply chains, simultaneous pressures and constraints on local restaurants, and the boom of e-commerce.

Although cooking is integral to human history and the daily lives of billions of people around the world, it remains understudied. A 2017 metanalysis found only 38 observational studies assessing health and social determinants and outcomes of home cooking among the general population.[1] The conceptual model based on the metanalysis shows many layers and drivers that can influence the practice of home cooking, such as culture, gender, age, and availability of time and resources, to name a few.

> Our analysis tracking three years of cooking around the world comes to a similar conclusion: There are many "push" and "pull" factors that can impact an individual's decision to cook and eat home-cooked meals, and these factors are even harder to explain during a year when the daily routines of the vast majority of the planet were disrupted.

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[1]   Mills, S., White, M., Brown, H., Wrieden, W., Kwasnicka, D., Halligan, J., Robalino, S., & Adams, J. (2017). Health and social determinants and outcomes of home cooking: A systematic review of observational studies. *Appetite, 111,* 116-34. https://doi.org/10.1016/j.appet.2016.12.022

In this report we discuss some of the reasons people may have cooked more or less during the pandemic and draw from external sources to share "food for thought" on why that might be the case. One of the strengths of the research is that we have two prior years of observation with which to compare. The survey has remained essentially unchanged for the past three years.[2] Ideas about what constitutes cooking vary, especially across food cultures. Gallup defines cooking as a meal prepared at home, mostly from ingredients such as vegetables, meats and grains (Figure 2).

We are able to look at many of the factors seen in the literature, despite not having insight into all the possible factors that could influence the results. What we find is that the proven positive outcomes of cooking — such as improved health and connection to one's loved ones and culture — are not currently being fully capitalized on by everyone who could benefit from them.

This report raises important questions about how cooking can be made to be more accessible, sustainable and equitable for the good of individuals, families, communities and the planet.

FIGURE 1

Health and social determinants and outcomes of home cooking

Source: Mills, S., White, M., Brown, H., Wrieden, W., Kwasnicka, D., Halligan, J., Robalino, S., & Adams, J. (2017). Health and social determinants and outcomes of home cooking: A systematic review of observational studies. *Appetite, 111,* 116-34. https://doi.org/10.1016/j.appet.2016.12.022
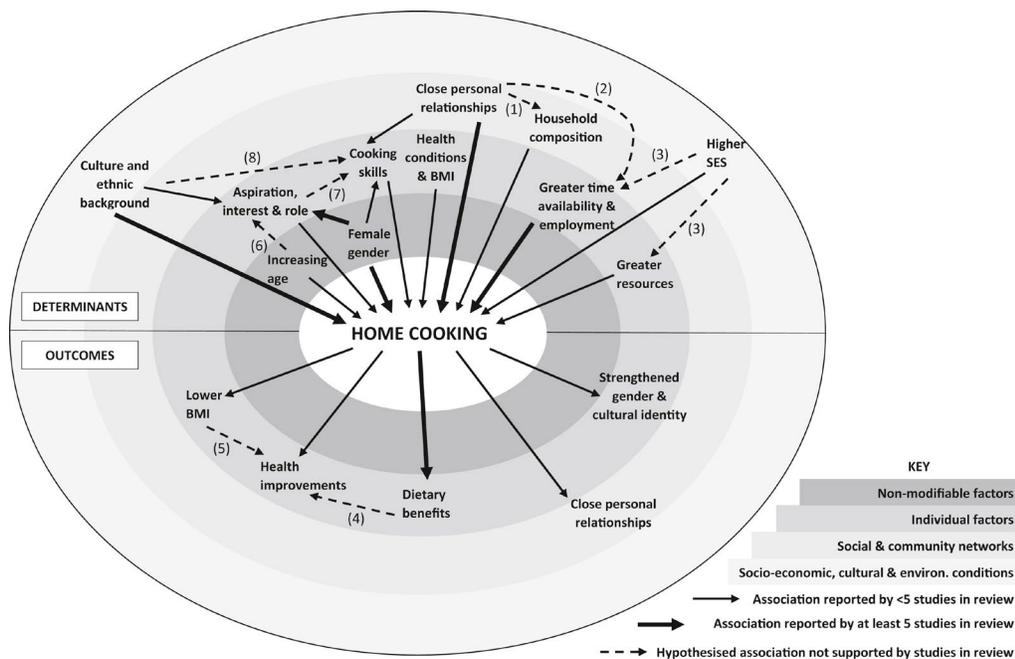
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2   The survey was changed after Year 1 to reduce cognitive burden on the respondents by reordering the questions and collapsing response options regarding who else was cooking meals.

FIGURE 2

Gallup World Poll questions on home cooking created with Cookpad

The next few questions will ask you about cooking at home. By "cooking at home" I mean a meal prepared AT HOME from ingredients such as vegetables, meats, grains, or other ingredients. Please do not think about pre-made foods or leftovers that you reheat.

▶ Thinking about the past 7 days, on how many days did YOU, personally, COOK LUNCH AT YOUR HOME?

▶ Thinking about the past 7 days, on how many days did YOU, personally, EAT LUNCH that was cooked AT YOUR HOME, either by you or someone else?

▶ Please tell me whether any of the following people COOKED any of those LUNCHES AT YOUR HOME in the past 7 days?

• (if married:) Your spouse/partner

• A family member/(if married:) Some other family member

• Some other person who is not a family member

▶ Thinking about the past 7 days, on how many days did YOU, personally, COOK DINNER AT YOUR HOME?

▶ Thinking about the past 7 days, on how many days did YOU, personally, EAT DINNER that was cooked AT YOUR HOME, either by you or someone else?

▶ Please tell me whether any of the following people COOKED those DINNERS AT YOUR HOME in the past 7 days?

• (if married:) Your spouse/partner

• A family member/(if married:) Some other family member

• Some other person who is not a family member

A NOTE ABOUT THE 2020 REPORT

The Gallup World Poll has been collecting nationally representative data from over 140 countries and territories annually since 2005. The disruption caused by the COVID-19 pandemic was unprecedented. Because Gallup's World Poll requires the data results to be representative of the adult population in each selected country, Gallup's sampling design, research protocol and quality-control processes all had to be adapted to meet this requirement and ensure safe data collection.

The 2020 data include fewer countries than previous administrations. Because of COVID-19, all countries needed to be surveyed by phone and not all countries from previous Gallup World Poll fielding could be surveyed to achieve a nationally representative sample over the phone.[3] These changes were necessary to successfully collect data in 2020, but also provided the opportunity to analyze potential effects of the mode change in relation to the effects of the pandemic. More information can be found here.

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3   With the exception of the Republic of the Congo, Pakistan, Mali and Senegal where face-to-face interviewing was still possible at the time of interviewing.

SECTION 1

How much did the world cook in 2020?

In this section:

- **The global average decrease in cooking at home — from 6.9 to 6.7**[4] — is primarily due to a **decrease in cooking in China**, where people reported cooking two fewer meals per week compared to the year prior.

- Had it not been for the population of China, the global frequency of cooking per week **would have risen to 6.8 in 2020 from 6.5 in 2019**.

- The **biggest regional growth** in cooking during the pandemic was in **Northern America, Latin America and Europe**, where people reported cooking at least **0.6 extra meals per week**.

- **Other individual countries in Asia, unlike China, saw increases in cooking.** Indonesians cooked 2.5 extra meals per week in 2020, making it the third-ranked country globally.

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4   Total meals calculated as the sum of lunch and dinner data past the first decimal. Results may vary from the sum of rounded lunch and dinner numbers presented in this report. Data reported across years may differ from previous waves of this report due to rounding.

In 2020, the world cooked 6.7 meals per week compared to 6.9 in 2019 and 6.5 in 2018.

Annual global frequency of cooking and eating home-cooked meals
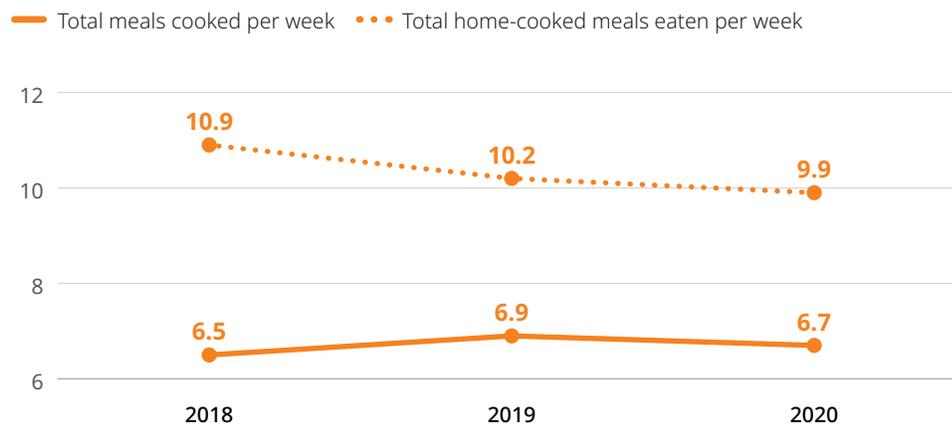
Given the circumstances of 2020, when most of the world's population experienced at least one lockdown, restrictions in movement were put in place and therefore more people spent more time at home, this slight decrease might be considered surprising. This one figure of course does not tell the whole story and there are many regional and country variations that give us a deeper insight.

There is one country that has a significantly larger decrease in home-cooking frequency than all the others: China. In 2019, China had the highest frequency of home cooking at 8.3 meals per week, a rise of 0.3 meals from 2018. However, in the 2020 survey, China's home cooking frequency dropped to 6.3 meals per week. Because China is the most populous country in the world, the decrease in its cooking frequency by two fewer meals a week explains the overall average decrease. If the global average did not take China into account, the global frequency of cooking per week would have risen to 6.8 in 2020 from 6.5 in 2019.

> **In 2020, the frequency of cooking lunch remained unchanged, and the frequency of cooking dinner decreased by a fifth of a meal per week.**

Eating home-cooked lunches and dinners globally also decreased slightly.

The overall global trends in 2020 are a reflection of China cooking and eating on average one less lunch or dinner per week, while the rest of the world cooked 0.3 more lunches and 0.2 more dinners.

FIGURE 4

Annual global frequency of cooking and eating home-cooked meals: Lunch and dinner

— Number of days cooked lunch at home in past seven days
••• Number of days ate lunch cooked at home in past seven days
— Number of days cooked dinner at home in past seven days
••• Number of days ate dinner cooked at home in past seven days
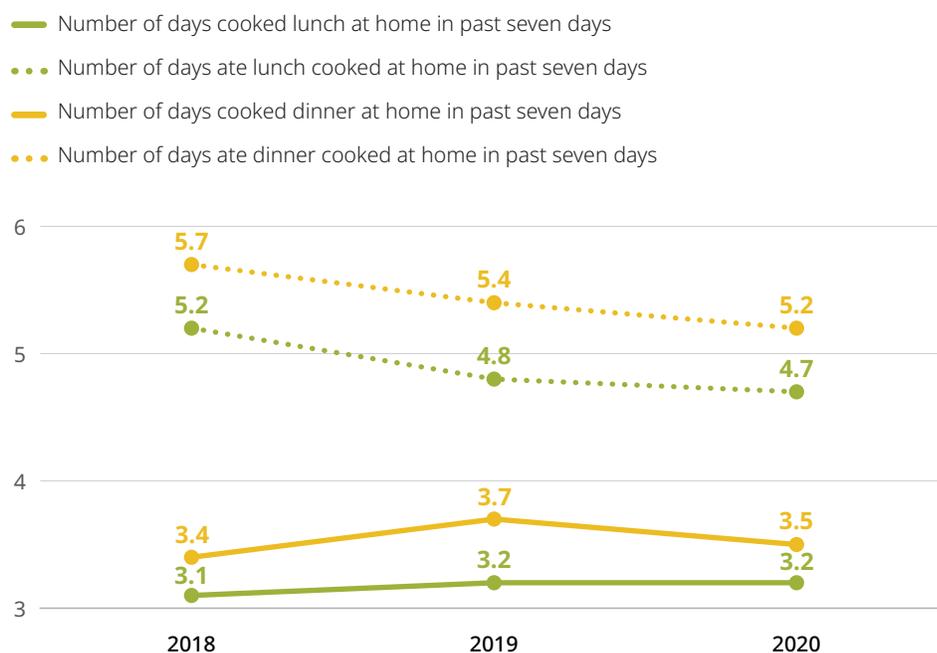
FIGURE 5

Global averages without China compared to China

Meals cooked per week
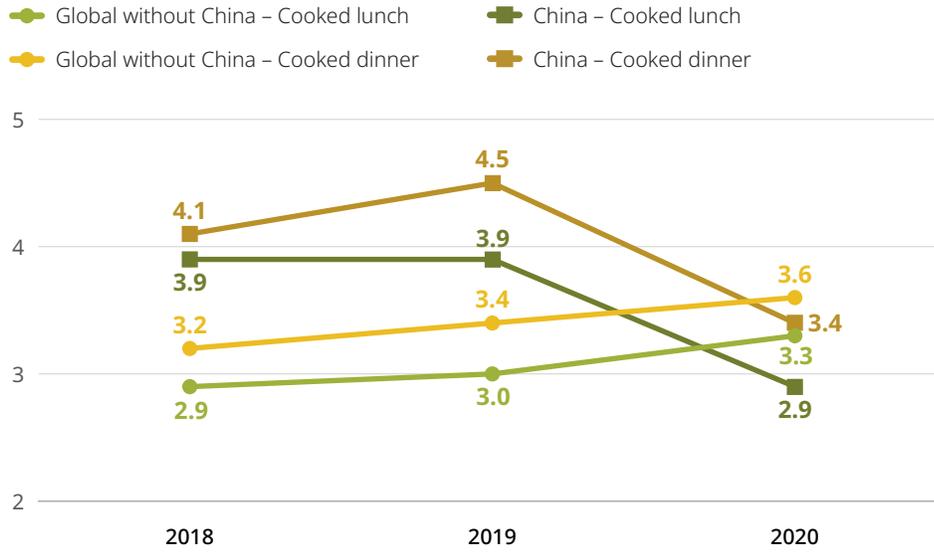
Home-cooked meals eaten per week
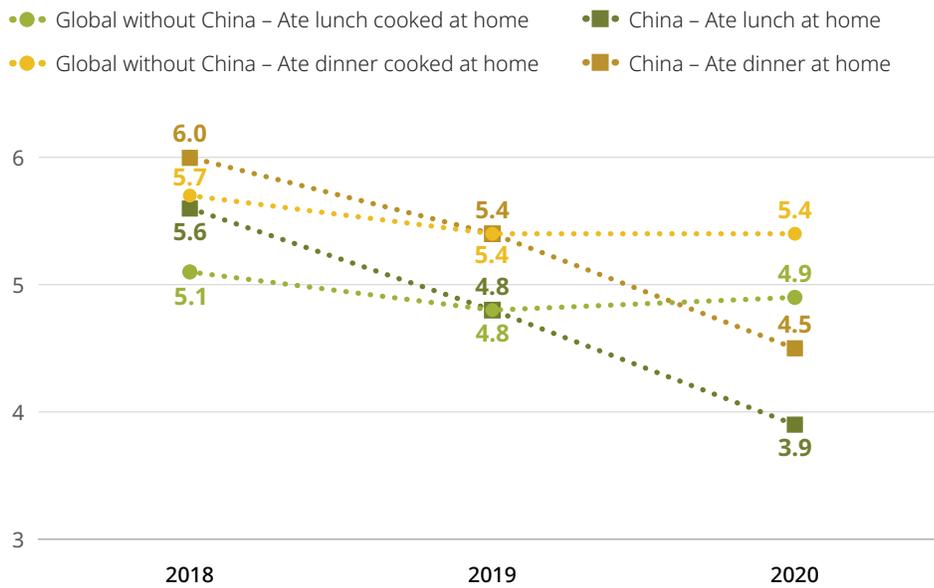
FIGURE 6

Change in 2020 home cooking and population size
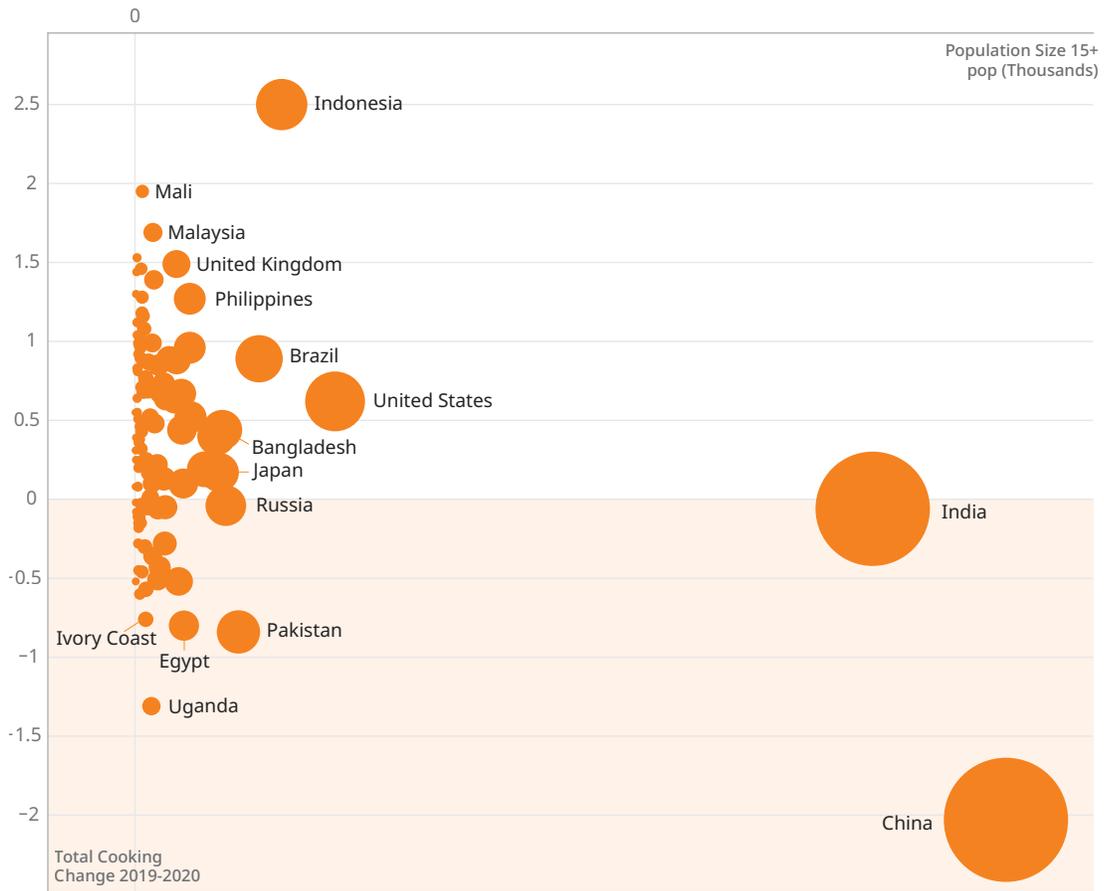
Average total cooking 2020

Total meals cooked per week

3.3   9.0
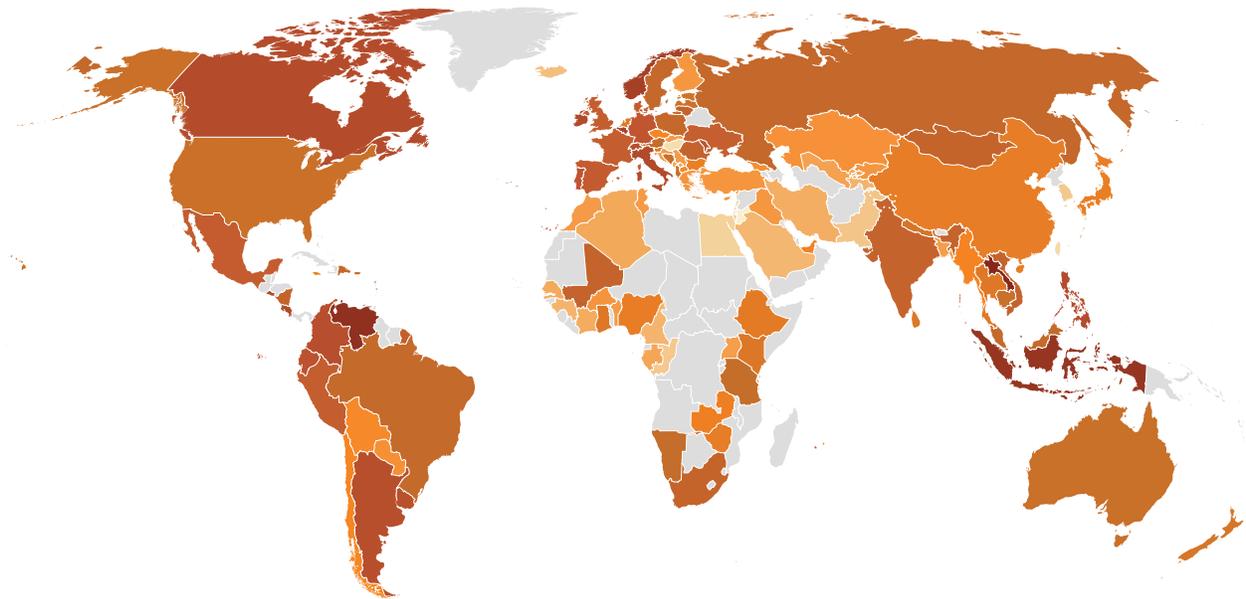
Changes in cooking in 2020

● Total meals cooked per week 2019 ● Total meals cooked per week 2020

Country	2019	2020
Laos	8.0	9.0
Venezuela	8.0	8.8
Indonesia	6.2	8.7
Norway	7.4	8.4
Belgium	7.1	8.3
El Salvador	7.7	8.2
Costa Rica	7.4	8.2
Ireland	7.1	8.2
Italy	7.6	8.2
Philippines	6.9	8.2
Canada	7.3	8.1
Switzerland	7.2	8.1
Argentina	7.4	8.1
Colombia	7.3	8.0
Uruguay	6.5	8.0
Moldova	7.0	8.0
Ecuador	6.9	8.0
Portugal	7.2	8.0
Germany	7.0	7.9
Spain	7.8	7.8
Mexico	7.5	7.7
Denmark	7.4	7.6
France	6.8	7.6
United Kingdom	6.1	7.6
Peru	6.6	7.6
Ukraine	7.5	7.6
Lithuania	6.3	7.4
Vietnam	6.9	7.4
India	7.4	7.5
Romania	6.7	7.4
Mali	5.4	7.3
Nicaragua	7.3	7.8
Mongolia	5.9	7.3
South Africa	6.6	7.3
Russia	7.2	7.2
Dominican Republic	6.2	7.2
Sweden	6.3	7.2
Poland	7.1	7.5
Malaysia	5.4	7.1
Brazil	6.2	7.1
Austria	6.6	7.0
Namibia	5.7	7.0
Bosnia and Herzegovina	6.2	6.8
Albania	6.0	6.8
Cambodia	6.1	6.8
Tanzania	6.8	6.9
Australia	6.3	6.8
United States	6.2	6.8
Latvia	6.4	6.8
Estonia	6.7	7.2
Nepal	6.5	6.6
New Zealand	6.5	6.6
Hong Kong	5.5	6.5
Sri Lanka	6.5	6.6
Ghana	5.6	6.5
Kenya	6.4	6.9
Thailand	6.4	7.0
Slovenia	6.4	6.5

Changes in cooking in 2020 (continued)

● Total meals cooked per week 2019 ● Total meals cooked per week 2020

Country	2019	2020
Bahrain	5.6	6.4
Netherlands	7.0	6.4
Ethiopia	6.3	6.4
Zimbabwe	6.4	6.3
China	8.3	6.3
Nigeria	5.9	6.3
Japan	6.1	6.3
Bulgaria	5.2	6.2
Malta	6.1	6.2
Zambia	6.6	6.2
Jamaica	4.9	6.1
United Arab Emirates	4.6	6.1
Myanmar	6.3	6.0
Czech Republic		6.0
Chile	5.7	6.0
North Macedonia	5.2	5.9
Mauritius	5.9	5.9
Bolivia	6.0	5.8
Georgia	5.3	5.8
Paraguay	5.9	5.8
Kazakhstan	6.0	5.7
Cyprus	5.4	5.7
Turkey	5.0	5.7
Burkina Faso	4.5	5.6
Greece	4.4	5.6
Kyrgyzstan	5.9	5.6
Finland	5.7	5.6
Iraq	5.5	5.4
Croatia	4.7	5.5
Morocco	5.0	5.5
Slovakia	4.6	5.5
Tunisia	5.0	5.5
Serbia	5.1	5.5
Benin	6.1	5.5
Bangladesh	4.9	5.4
Uganda	6.7	5.4
Uzbekistan	5.7	5.3
Kosovo	4.9	5.2
Gabon	4.9	5.2
Montenegro	4.6	5.1
Algeria	4.9	5.1
Senegal	4.7	5.1
Ivory Coast	5.8	5.0
Iran	4.6	5.0
Guinea	4.7	4.9
Cameroon	4.1	4.9
Tajikistan	5.0	4.9
Saudi Arabia	3.4	4.8
Iceland		4.7
Pakistan	5.4	4.6
South Korea	3.6	4.5
Republic of the Congo	4.6	4.5
Israel	4.5	4.4
Egypt	5.2	4.4
Lebanon	3.8	4.2
Taiwan	4.1	4.1
Hungary	4.0	3.7
Jordan	3.4	3.3

Note: Only countries surveyed in 2020 are reported. See "Methodology" section for details on country survey years and survey history.

Why did cooking decrease in China in 2020?

There are a variety of interesting factors to consider regarding the striking decrease of two meals cooked at home per week in China, which in 2019 had been the top-ranked country in the world by cooking rate.

First, during the fielding period of Sept. 8 through Oct. 28, 2020, the level of government stringency in China was approximately 62.1/100 based on the Oxford COVID-19 Government Response Tracker (OxCGRT). This is in line with most other countries in the study. But the period between Sept. 22 and Oct. 24 also coincided with a period of eased restrictions (see Figure 9).

FIGURE 9

China OxCGRT in 2020
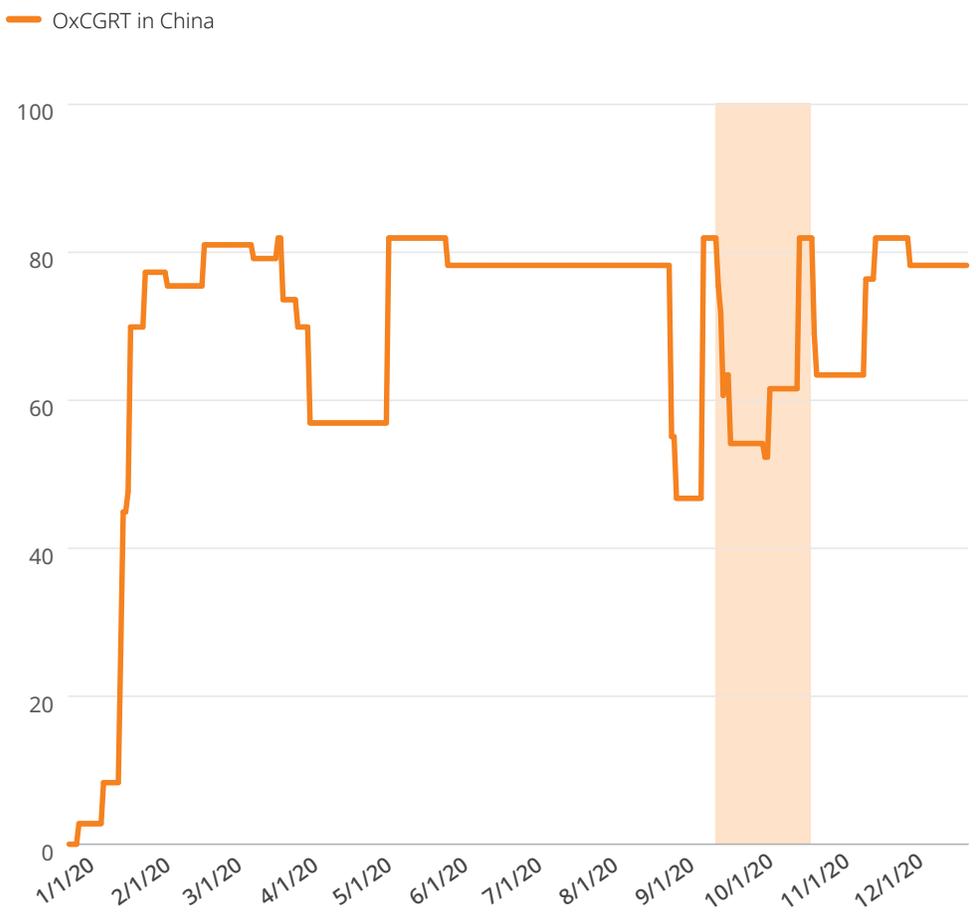
Secondly, a McKinsey survey in China in March of 2020[5] early in the pandemic found that consumers were expressing a 74% uptick in preference for online grocery delivery. In the survey they also expressed a strong desire to dine in at restaurants, order take out and food delivery, and return to grocery stores in person to buy pre-made meals and other ingredients when COVID-19 restrictions eased. It is possible that during this lull in restrictions, Chinese consumers were emboldened to order take out and return to the restaurants they had been forgoing since the start of the pandemic, given that the average level of stringency had stayed at 73.5/100 since March 2020.

China had also been experiencing a growth in the supply of food and grocery delivery services for some time, and demand is believed to have spiked during the pandemic as residents were confined to their immediate residential areas. Chinese residents may have also had limited expectations of being able to return to regular shopping in the near future, making fresh items seem a less desirable option. In August of 2020, CNBC wrote that Meituan Dianping, "China's biggest on-demand delivery services firm, reported net profit of … $319.5 million, a more than 152% year-on-year rise." Further, Meituan's food delivery "saw a more than 65% uptick, as an increasing number of people ordered meals to their homes. And Meituan also said that the number of newly-onboard branded merchants increased by more than 110% on-year in the second quarter."[6]

Another food delivery service, Ele.me, told the *South China Morning Post* in April 2020 that, between Jan. 21 and Feb. 8, frozen food deliveries increased more than 600% compared with the previous year.[7]

The change in cooking in China in 2020 effectively brought the overall frequency in line with the rest of the world, and cooking rates decreased across every demographic group. The biggest reductions in home cooking were in line with the consumer trends in online purchases of pre-made meals described previously. Single-person households cooked 3.6 fewer meals per week. The middle and upper-middle income groups (comprising the middle and fourth richest quintiles) cooked between 2.5 and 3.2 fewer meals per week, and people living in a large city or a suburb cooked 1.7 to 1.9 fewer meals per week.[8]

There may be signs that some of the people cooking fewer meals were struggling with financial difficulties. People who were employed part time but wanted to work full time or who were unemployed cooked between 2.4 and 3.0 fewer meals per week. But interestingly, both people who reported having trouble affording food in the past year and those who did not cooked two fewer meals on average per week (1.9 vs. 2.1, respectively).

5   McKinsey & Company. (2020, April 14). Survey: Food retail in China during the COVID-19 pandemic. Available from: https://www.mckinsey.com/industries/retail/our-insights/survey-food-retail-in-china-during-the-covid-19-pandemic

6   Kharpal, A. (2020, August 24). China's e-commerce giants get a boost as consumers continue to shift online after coronavirus. CNBC. Available from: https://www.cnbc.com/2020/08/24/china-e-commerce-boosted-by-shift-to-online-shopping-after-coronavirus.html

7   Cai, J. & Chik, H. (2020, April 7). Coronavirus: How China's army of food delivery drivers helped keep country going during outbreak. *South China Morning Post*. Available from: https://www.scmp.com/news/china/society/article/3078749/coronavirus-how-chinas-army-food-delivery-drivers-helped-keep

8   Not all respondents reached over the phone can be categorized geographically.

FIGURE 10

Changes in cooking — Spotlight on China compared to the rest of the world, by total meals cooked per week

● World (without China) 2019 ● World (without China) 2020 ■ China 2019 ■ China 2020

		World (without China) 2019	World (without China) 2020	China 2019	China 2020
Overall	Total meals cooked per week	6.5	6.8	8.3	6.3
Household size	One person in household	7.2	7.5	8.8	5.2
	Two people in household	7.0	7.4	8.8	7.0
	Three to six people in household	6.4	6.8	7.9	6.3
Education	Elementary education or less	7.0	6.9	9.4	7.8
	Secondary education/ Some education beyond secondary	6.2	6.9	6.6	5.3
	Four years beyond high school and/ or received a 4-year college degree	5.7	6.5	5.4	3.8
Employment	Employed full time for an employer	5.0	5.6	6.6	4.7
	Employed full time for self	5.8	5.9	8.7	6.5
	Employed part time, do not want full time	6.7	7.7	8.2	6.7
	Unemployed	6.3	7.0	9.9	6.9
	Employed part time, want full time	7.1	6.9	10.0	7.6
	Out of workforce	7.3	8.0	9.4	7.9
Gender	Male	3.8	4.4	6.6	5.0
	Female	9.0	9.4	10.1	7.8

FIGURE 10

Changes in cooking — Spotlight on China compared to the rest of the world, by total meals cooked per week (continued)

● World (without China) 2019   ● World (without China) 2020   ■ China 2019   ■ China 2020

Urbanicity

	2019	2020	China 2019	China 2020
A rural area or on a farm	6.6	6.6	9.1	7.5
A small town or village	6.7	7.0	8.0	6.5
A large city	6.1	6.8	7.2	5.5
A suburb of a large city	6.1	6.7	7.6	5.7

Income

Living comfortably on present income	6.2	6.9	7.3	5.7
Getting by on present income	6.4	6.9	8.3	6.0
Finding it difficult on present income	6.7	6.7	8.8	7.0
Finding it very difficult on present income	6.6	6.9	9.2	7.4

Income quintile

Poorest 20%	6.8	6.9	9.4	8.2
Second 20%	6.5	6.8	8.9	7.5
Middle 20%	6.4	6.8	8.9	6.4
Fourth 20%	6.2	6.8	8.2	5.0
Richest 20%	6.2	6.8	6.4	4.4

Age

15-29	5.7	6.3	5.7	3.5
30-49	7.0	7.2	8.4	6.1
50-64	6.8	7.1	9.9	8.3
65+	6.8	7.8	9.2	8.7

Regional changes in cooking

This global decrease in cooking and in eating home-cooked meals was not consistent across all regions.

The biggest gains were in Northern America, Latin America and Europe which saw a significant increase with an additional two-thirds of a meal cooked at home per week on average (0.6, 0.7 and 0.6, respectively). The two regions with the lowest cooking frequency in 2019 saw modest increases of 0.2 in sub-Saharan Africa and 0.3 in the Middle East and North Africa.
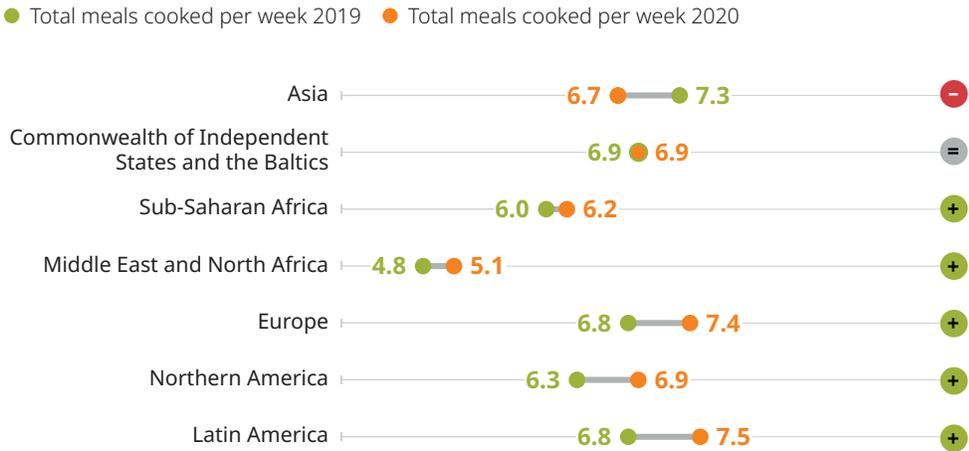
> In contrast, one region saw a significant decrease. In 2019, Asia had the highest frequency of cooking, but in 2020 it had one of the lowest, with a substantial reduction in cooking frequency from 7.3 to 6.7 meals per week.

The main reason for both the increase in 2019 and the decrease in 2020 was the change in China. Without China, the Asian average was 7.0 meals per week in 2020 compared to 6.7 in 2019.

The frequency of cooking in the Commonwealth of Independent States and the Baltics remained the same (6.9).

FIGURE 11

Change in weekly cooking by region

● Total meals cooked per week 2019   ● Total meals cooked per week 2020

| Region	2019	2020	Change
Asia	6.7	7.3	−
Commonwealth of Independent States and the Baltics	6.9	6.9	=
Sub-Saharan Africa	6.0	6.2	+
Middle East and North Africa	4.8	5.1	+
Europe	6.8	7.4	+
Northern America	6.3	6.9	+
Latin America	6.8	7.5	+

Decreases in eating home-cooked meals were also varied across regions.

The number of home-cooked meals eaten in 2020 dropped in sub-Saharan Africa and the Middle East and North Africa, where people ate approximately one fewer home-cooked meal per week (1.1 and 0.9 fewer meals, respectively). More modest changes were seen in Asia, Latin America, and the Commonwealth of Independent States and the Baltics (between 0.5 and 0.2 fewer meals eaten per week). However, in Europe (0.3 more meals eaten per week) and Northern America, the frequency of eating home-cooked meals increased — especially in the latter, where people ate 1.1 more home-cooked meals per week.

FIGURE 12

Change in weekly eaten home-cooked meals by region

● Home-cooked meals eaten per week 2019   ● Home-cooked meals eaten per week 2020

Region	2020	2019	
Sub-Saharan Africa	9.3	10.4	−
Middle East and North Africa	9.5	10.4	−
Asia	9.6	10.1	−
Latin America	10.8	11.2	−
Commonwealth of Independent States and the Baltics	11.3	11.5	−
Europe	10.3	10.6	+
Northern America	8.4	9.5	+
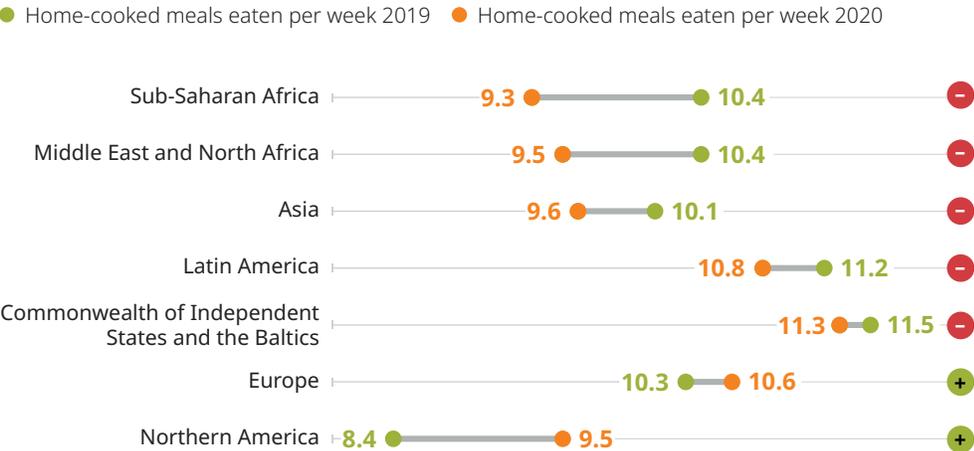
Home cooking by country

There were a number of changes in the countries with the highest frequency of home cooking in the world in 2020.

> **The biggest increase was seen in Indonesia, which increased 65 positions in the ranking and was third after Laos and Venezuela.**

European countries Norway, Belgium and Ireland also gained 10 to 25 positions compared to the year prior. The Philippines also increased 29 positions.

In 20 countries, people cooked at least one full meal per week more than in 2019.[9] Among these 20 countries, Asia, Europe and Latin America are the most represented regions, and it is the latter two regions that showed some of the biggest increases year-over-year.
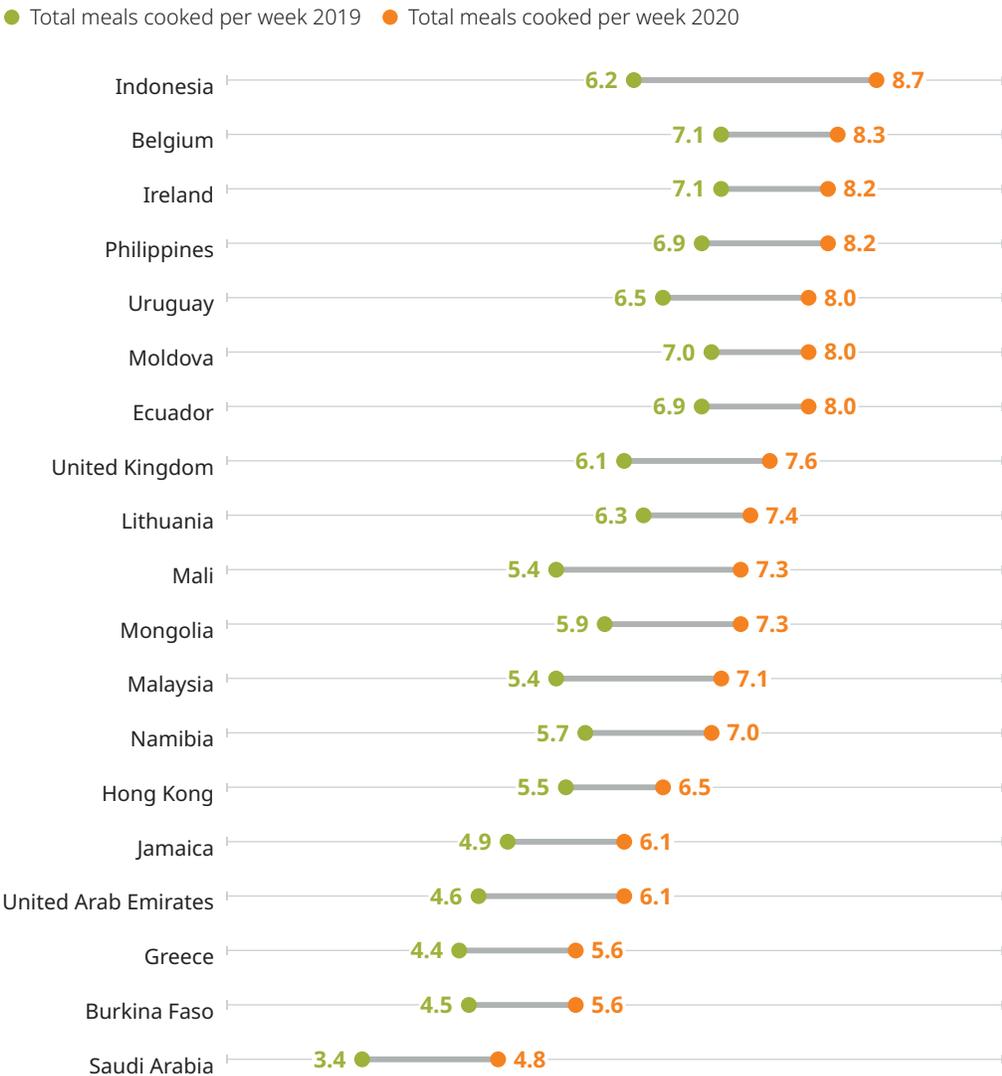
FIGURE 13

Ranking of top-10 countries by home-cooked meals in 2020

	Rank 2019		Rank 2020	Change in rank
Laos	4	→	1	+3
Venezuela	3	→	2	+1
Indonesia	68	→	3	**+65**
Norway	14	→	4	**+10**
Belgium	30	→	5	**+25**
El Salvador	7	→	6	+1
Costa Rica	16	→	7	+9
Ireland	29	→	8	**+21**
Italy	8	→	9	**-1**
Philippines	39	→	10	**+29**

9   Analysis based on countries that cooked at least one more meal per week prior to rounding. Of these 20, the change was statistically significant in 15.

In most of the 116 countries surveyed in 2020, there wasn't a meaningful change in the frequency of weekly cooking on average.[10] The biggest increase was in one of the countries that made it into the top 10 for the first time, Indonesia, which cooked an extra 2.5 meals per week. Additionally, people in Mali and Malaysia also cooked approximately two extra meals per week (1.9 and 1.7, respectively). As noted previously, some countries also cooked less in 2020: People in China cooked two fewer meals per week and Ugandans cooked 1.3 fewer meals per week. Only China and Uganda saw a decrease of at least one meal cooked at home per week.

FIGURE 14

Countries where people cooked at least one extra meal per week in 2020

● Total meals cooked per week 2019　● Total meals cooked per week 2020

Country	2019	2020
Indonesia	6.2	8.7
Belgium	7.1	8.3
Ireland	7.1	8.2
Philippines	6.9	8.2
Uruguay	6.5	8.0
Moldova	7.0	8.0
Ecuador	6.9	8.0
United Kingdom	6.1	7.6
Lithuania	6.3	7.4
Mali	5.4	7.3
Mongolia	5.9	7.3
Malaysia	5.4	7.1
Namibia	5.7	7.0
Hong Kong	5.5	6.5
Jamaica	4.9	6.1
United Arab Emirates	4.6	6.1
Greece	4.4	5.6
Burkina Faso	4.5	5.6
Saudi Arabia	3.4	4.8

10 Changes were statistically significant in 75 countries. Not all statistically significant differences are meaningful for the purposes of analysis. The median change was an increase of 0.5 meals cooked per week.

FOOD FOR THOUGHT:

Why did Indonesians cook more in 2020?

Out of all the countries surveyed, Indonesia saw the highest increase in cooking frequency per week between 2019 and 2020. On average, people in Indonesia cooked 2.5 additional meals per week than in 2019 (8.7 meals, up from 6.2 in 2019). This was despite the fact that at the time of fielding, the stringency of lockdown was 59.8/100, which was essentially the same as in China at the time of fielding.[11]

Since the start of the pandemic, the Indonesian government has provided financial and social assistance to counter the loss of businesses, jobs and wages.[12] By the time of our fielding in November 2020, the President stated that the implementation of salary assistance or subsidies for workers with salaries below IDR.5 million reached 82% and working capital assistance to micro enterprises reached 79%.[13] Nevertheless, according to World Bank research in May, 31% of households reported food shortages and 38% reported eating less than usual, compared with 3% and 5%, respectively, the previous year.[14] So while receiving assistance from the government, people were clearly eating more home-cooked meals than usual, but the size and the quality of those meals was most likely not the same for everyone.

> **The biggest changes in cooking frequency were among college educated people, men and people over 65. All these groups cooked nearly four additional meals per week compared to 2019.**

Groups cooking around three more meals per week included people who were employed full time either for an employer or self-employed, people in the middle-income quintile, people who were finding it difficult on their present income and people under 30.

The only groups who cooked with a similar frequency as before the pandemic were those who were finding it very difficult to get by on their present income and those who were employed part time but wanted full time.

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11 See "Status of the Oxford COVID-19 Government Response Tracker (OxCGRT) during fielding" in the "Methodology" section.

12 KPMG. (2020, December 2). Indonesia — Government and institution measures in response to COVID-19. Available from: https://home.kpmg/xx/en/home/insights/2020/04/indonesia-government-and-institution-measures-in-response-to-covid.html
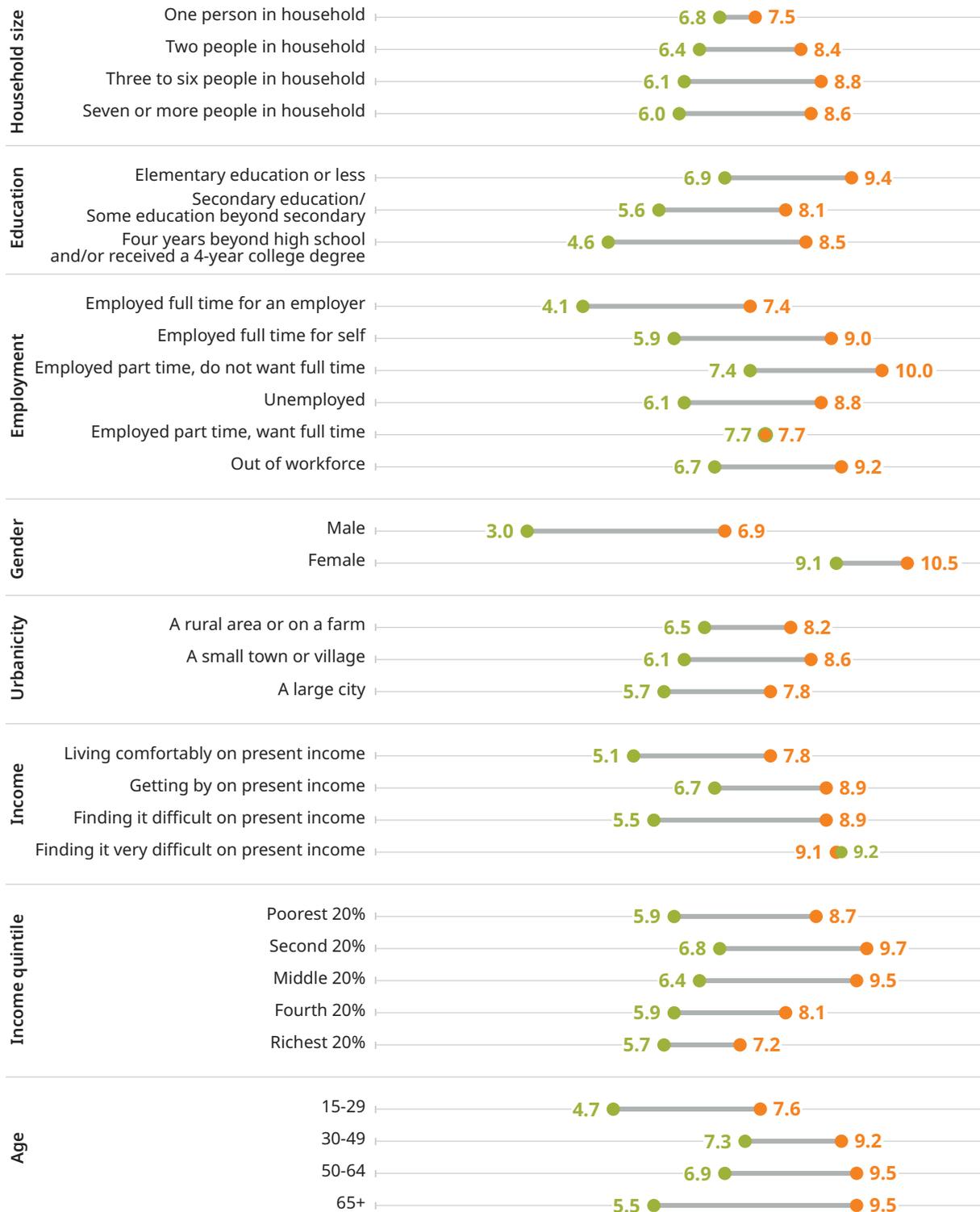
13 UN Office for the Coordination of Humanitarian Affairs. (2020, November 23). Situation Update: Response to COVID-19 in Indonesia (As of 23 November 2020) [EN/ID]. Available from: https://reliefweb.int/report/indonesia/situation-update-response-covid-19-indonesia-23-november-2020-enid

14 Purnamasari, R. & Ali, R. (2020). High-frequency monitorıng of households: Summary of Results from Survey Round 1, 1–7 May 2020. Indonesia COVID-19 Observatory Brief No. 3. Washington, D.C., World Bank. Available from: https://openknowledge.worldbank.org/handle/10986/34740

FIGURE 15

Cooking frequency in Indonesia in 2020 compared to 2019

● Total meals cooked per week 2019　● Total meals cooked per week 2020

Household size

	2019	2020
One person in household	6.8	7.5
Two people in household	6.4	8.4
Three to six people in household	6.1	8.8
Seven or more people in household	6.0	8.6

Education

	2019	2020
Elementary education or less	6.9	9.4
Secondary education/Some education beyond secondary	5.6	8.1
Four years beyond high school and/or received a 4-year college degree	4.6	8.5

Employment

	2019	2020
Employed full time for an employer	4.1	7.4
Employed full time for self	5.9	9.0
Employed part time, do not want full time	7.4	10.0
Unemployed	6.1	8.8
Employed part time, want full time	7.7	7.7
Out of workforce	6.7	9.2

Gender

	2019	2020
Male	3.0	6.9
Female	9.1	10.5

Urbanicity

	2019	2020
A rural area or on a farm	6.5	8.2
A small town or village	6.1	8.6
A large city	5.7	7.8

Income

	2019	2020
Living comfortably on present income	5.1	7.8
Getting by on present income	6.7	8.9
Finding it difficult on present income	5.5	8.9
Finding it very difficult on present income	9.2	9.1

Income quintile

	2019	2020
Poorest 20%	5.9	8.7
Second 20%	6.8	9.7
Middle 20%	6.4	9.5
Fourth 20%	5.9	8.1
Richest 20%	5.7	7.2

Age

	2019	2020
15-29	4.7	7.6
30-49	7.3	9.2
50-64	6.9	9.5
65+	5.5	9.5

How did the pandemic affect cooking at home?

In this section:

- In each country, **poorer people were less likely to cook and eat home-cooked meals in 2020 if they were affected** in some way by the pandemic.

- On the other hand, **wealthier people** — in each country but also overall in wealthier countries — **picked up cooking in 2020**, especially if they lost jobs or income or were otherwise affected by the pandemic.

- Across all income levels, **if those working at the time of the pandemic lost their job** because of it, **they cooked more often** — as many as 1.6 and 1.4 more meals per week for the richest and fourth-richest quintiles.

- Greater harm incurred during the pandemic did not automatically lead to more meals cooked per week. **High-income countries cooked more despite reporting less personal impact** from the pandemic.

- **Spikes in cooking reported in a subset of countries early in the pandemic were not sustained throughout 2020.** Nevertheless, in many of the countries more meals were cooked at home overall than in 2019.

Impact of COVID-19 on cooking

To assess the impact of the COVID-19 pandemic on individuals and the accompanying economic and social measures implemented by governments across the world, Gallup created a cumulative "COVID-19 Harm Index" using the individual questions on perceived and self-reported harms people incurred because of the pandemic.

The main finding was that existing inequalities — whether within countries or among countries — were exacerbated further by job losses, loss of income and work hours resulting from the pandemic.[15]

> **Over half (53%) of workers worldwide stopped working temporarily, 32% lost their jobs or businesses and about half saw their hours (49%) or wages cut (50%).[16]**

This highlights substantial changes in people's financial situations and also in their daily routines.

The Gallup COVID-19 Harm Index includes:

- The extent your life has been affected by the coronavirus situation

- If you lost a job or business as a result of the coronavirus situation

- Whether you received less money than usual from an employer or business as a result of the coronavirus situation

- Whether you temporarily stopped working at a job or business as a result of the coronavirus situation

- If you worked less hours at a job or business as a result of the coronavirus situation

15 Rothwell, J. (2021, May 3). How Social Class Affects Covid-Related Layoffs Worldwide. *The New York Times*. Available from: https://www.nytimes.com/2021/05/03/upshot/covid-layoffs-worldwide.html

16 Gallup. (2021, May 3). COVID-19 Put More Than 1 Billion Out of Work. Gallup.com. Available from: https://news.gallup.com/poll/348722/covid-put-billion-work.aspx

The deviation from the mean COVID-19 Harm Index plotted against countries that saw the biggest increases in weekly cooking shows that there is not a clear relationship between the two metrics at the country level, meaning that greater harm incurred during the pandemic did not automatically lead to more meals cooked per week.

> However, when we look at the plotted countries by World Bank income groupings, the majority of high-income countries cooked more despite reporting less personal impact from the pandemic.

Changes in weekly cooking frequency and COVID-19 harm
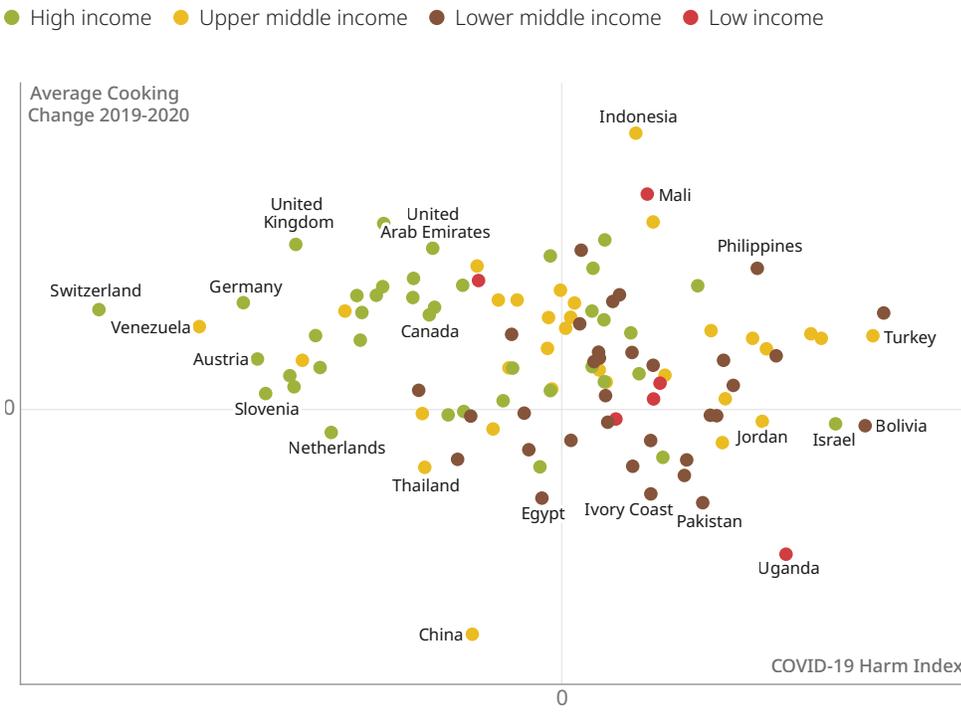
People were given the opportunity to report whether their lives were affected "a lot," "some" or "not at all" by the pandemic. When looking at cooking behaviors and how much people were affected, the middle 60% of the population by income did not have meaningful differences. However, people in the poorest 20% in each country reported cooking more than half an extra meal per week if they were affected "not at all," while the richest 20% globally increased their cooking frequency by nearly the same if they were affected "a lot."

This largely unchanged frequency of cooking is reflected in the number of home-cooked meals eaten per week, which also changed very little for all income groups — with the exception of people in the poorest quintiles who ate half a home-cooked meal less per week if they were affected "a lot" by the pandemic.

FIGURE 17

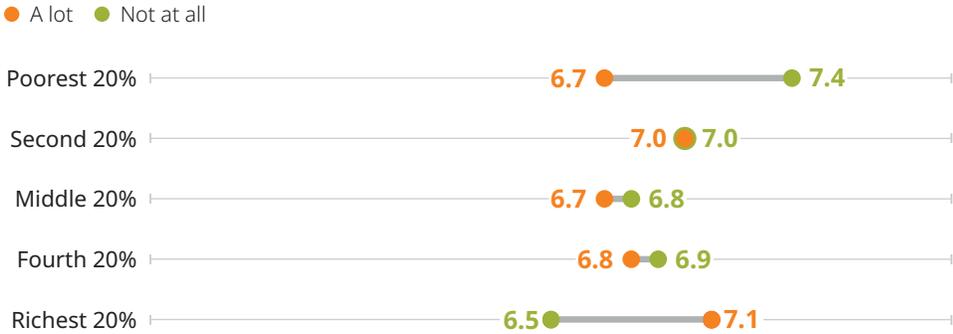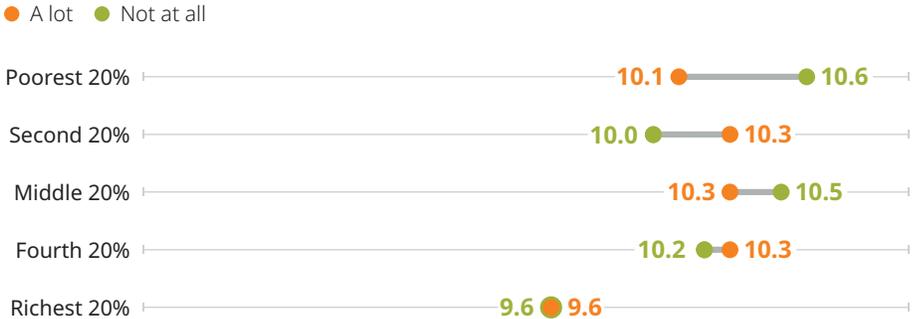**Weekly cooked meals: How much life was affected by COVID-19 and income**

FIGURE 18

Weekly eaten home-cooked meals: How much life was affected by COVID-19 and income

Gallup also asked people if they had lost their job or business due to the pandemic. Across all income quintiles, if those working at the time of the pandemic lost their job because of it, they cooked more often, as many as 1.6 and 1.4 more meals per week for the richest and fourth-richest quintiles.

But in terms of eating home-cooked meals, everyone across quintiles ate fewer home-cooked meals if they lost their job because of the pandemic — not too large of an extent for the middle 60%, but as many as 0.7 fewer meals for the poorest quintile and 0.6 for the wealthiest.

FIGURE 19

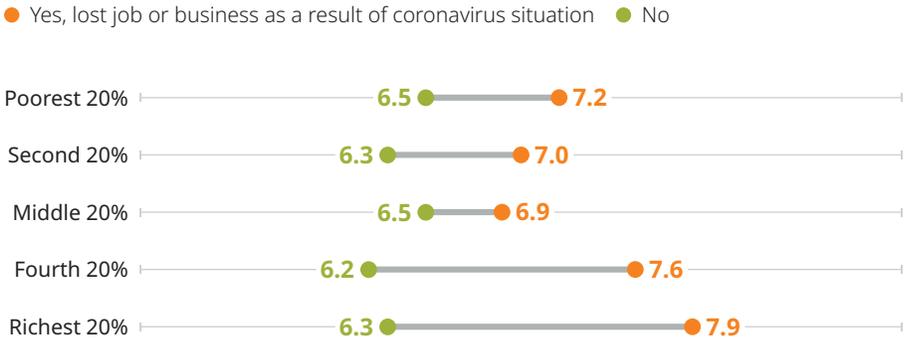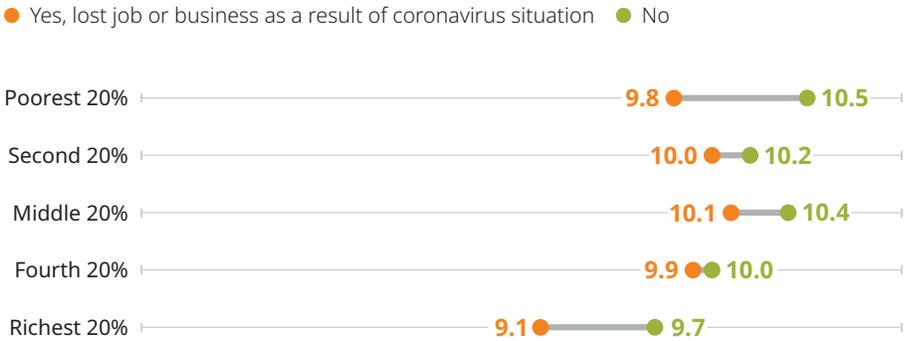**Weekly cooked meals: Job loss and income**

● Yes, lost job or business as a result of coronavirus situation   ● No

FIGURE 20

Weekly eaten home-cooked meals: Job loss and income

● Yes, lost job or business as a result of coronavirus situation   ● No

Gallup also asked people if they had received less money than usual from an employer or business as a result of the pandemic. Receiving less money than usual from an employer or business as a result of the coronavirus situation led to people cooking more meals per week on average only in the highest two quintiles, who cooked on average more than half an extra meal per week compared with those who did not see reduced wages. However, those in the poorest income quintile cooked nearly one half meal fewer per week if they had lost income because of the pandemic.
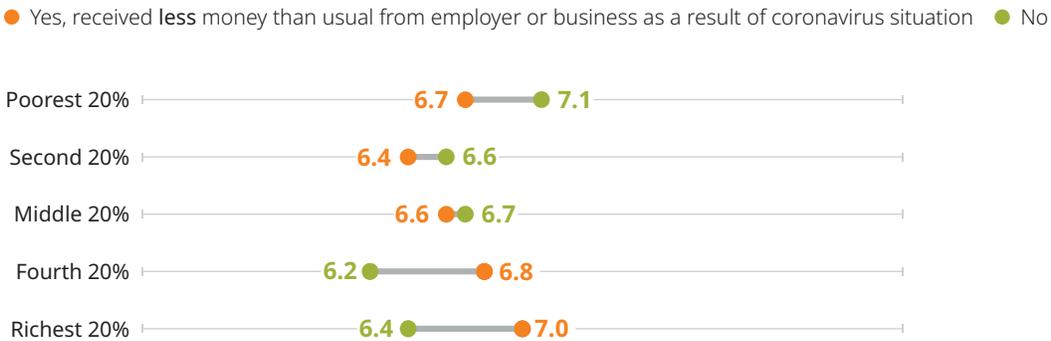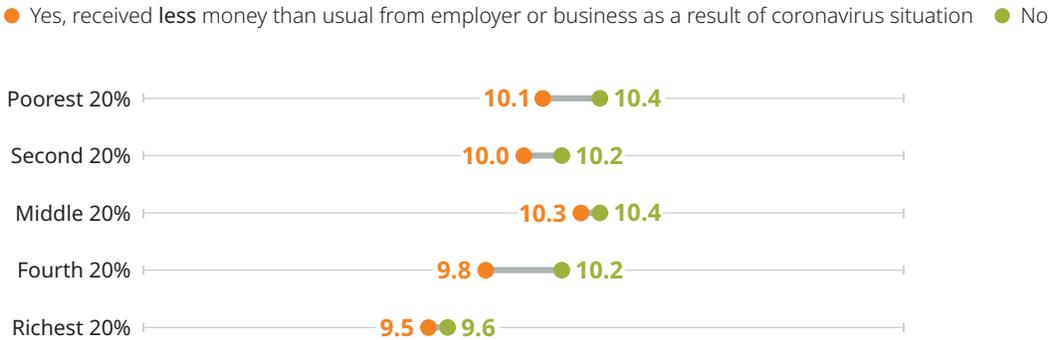
FIGURE 21

Weekly cooked meals: Less money and income

● Yes, received **less** money than usual from employer or business as a result of coronavirus situation   ● No

Poorest 20%	**6.7** ● ━━ ● **7.1**
Second 20%	**6.4** ● ● **6.6**
Middle 20%	**6.6** ● ● **6.7**
Fourth 20%	**6.2** ● ━━ ● **6.8**
Richest 20%	**6.4** ● ━━ ● **7.0**

FIGURE 22

Weekly eaten home-cooked meals: Less money and income

● Yes, received **less** money than usual from employer or business as a result of coronavirus situation   ● No

Poorest 20%	**10.1** ● ━━ ● **10.4**
Second 20%	**10.0** ● ● **10.2**
Middle 20%	**10.3** ● ● **10.4**
Fourth 20%	**9.8** ● ━━ ● **10.2**
Richest 20%	**9.5** ● ● **9.6**

In 2020, the global percentage of people who reported not having enough money to buy food that they or their family needed in the previous 12 months increased from 35% to 36%.

> Over time, cooking rates for people who reported struggling to afford food have always been slightly higher than those of people who had no trouble affording food.

The frequency of eating home-cooked meals is essentially the same, regardless of the ability to afford food. This also remained stable in 2020. Presumably, people who struggle to afford food cook at home more often because it can be cheaper than other alternatives. But the prevalence of undernourished people globally increased from 8.4% to 9.9% according to the FAO, also based on Gallup World Poll data.[17] So while we do know that people who struggled to afford food cooked at similar levels to the previous year, we don't know if the quality of their diets got worse.

FIGURE 23

Affording food vs. cooking and eating at home frequency

Have there been times in the past 12 months when you did not have enough money to buy food that you or your family needed?

• • • Eating at home frequency — Enough money for food

• • • Eating at home frequency — Not enough money for food

⎯⎯ Cooking frequency — Enough money for food

⎯⎯ Cooking frequency — Not enough money for food

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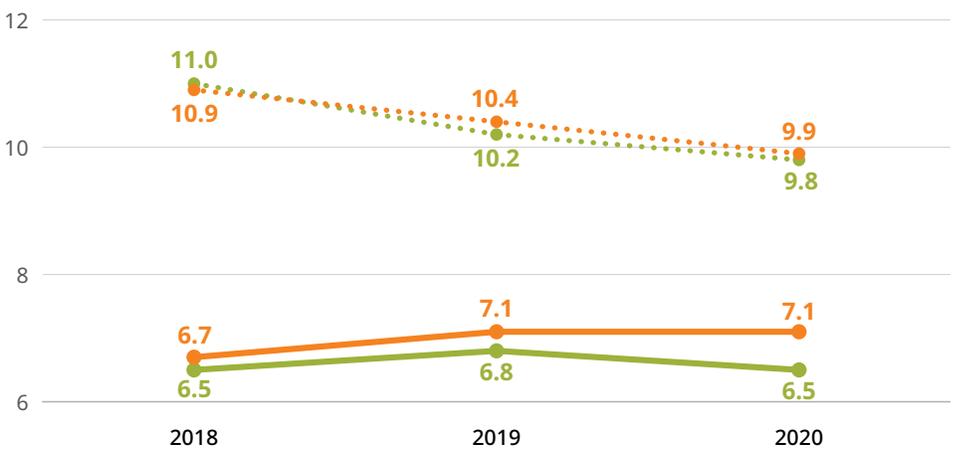
17 FAO, IFAD, UNICEF, WFP and WHO. (2021). The State of Food Security and Nutrition in the World 2021. Transforming food systems for food security, improved nutrition and affordable healthy diets for all. Rome, FAO. https://doi.org/10.4060/cb4474en

FOOD FOR THOUGHT:

How did the pandemic affect nutrition?

> The FAO report, *The State of Food Security and Nutrition in the World 2021*, which describes food insecurity during the pandemic, reveals that the international community's goal of ending world hunger and malnutrition has not only been set back but is, in fact, moving in the wrong direction.

The report highlights major vulnerabilities and inequalities that the pandemic has brought to the surface. It also begs the question of how cooking trends might be partially driven by issues with the food supply and the types of food to which people have access.
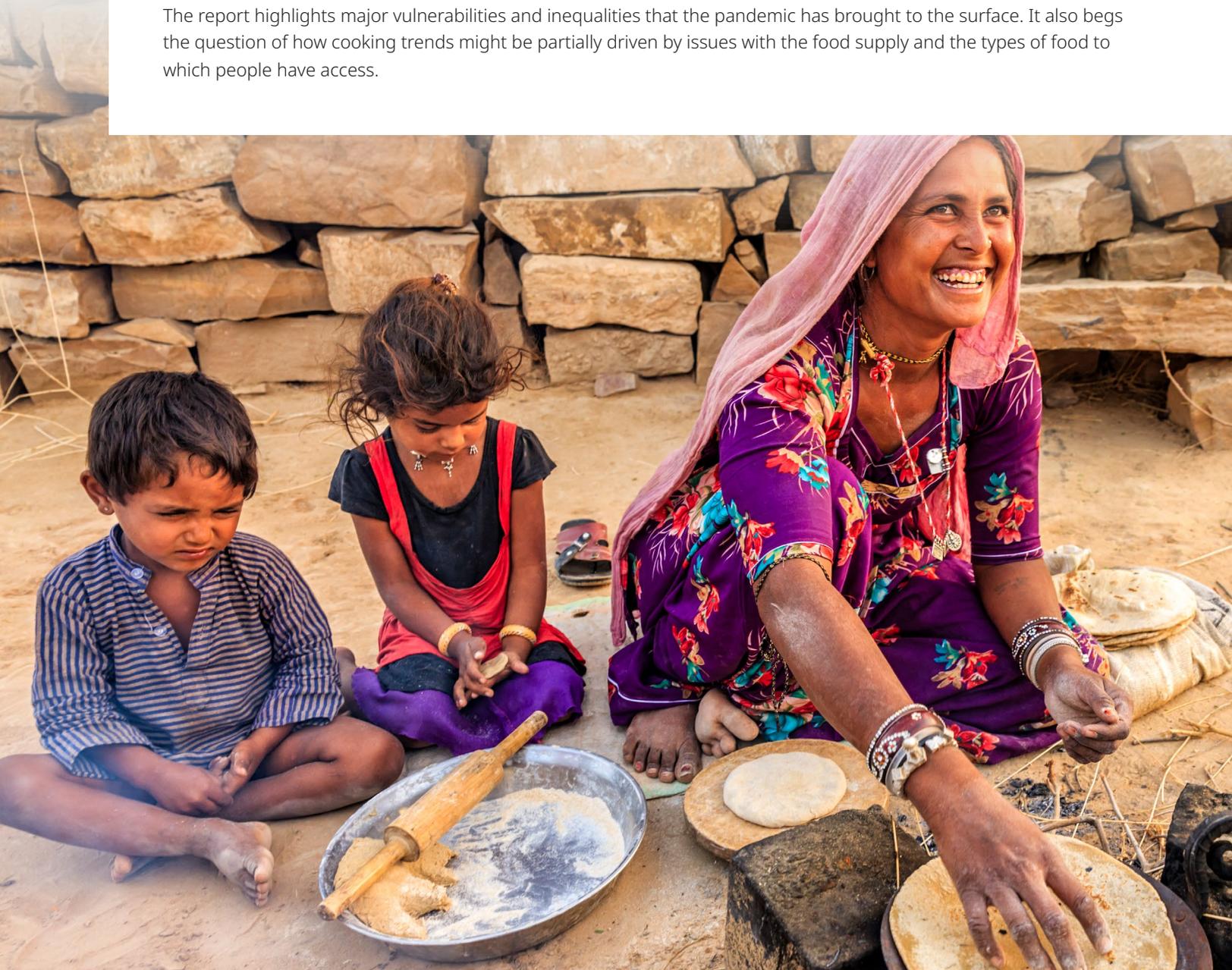
Some changes over the course of 2020

Uniquely in 2020, we were able to field questions at two different times of the year in 10 countries.[18] This opportunity to field twice was determined by the fact that the countries had started fielding just before lockdowns were announced and took place in the early stages of the first lockdown measures.

The second fielding was later in the year and was in line with the dates of data collection for the other 106 countries in the 2020 Gallup World Poll. This allows us to compare data from the early uncertain days of the pandemic to later in the pandemic when people had perhaps adjusted in some part to circumstances. In every country, the frequency of home cooking increased in the first part of 2020 compared to 2019. But only Australia and New Zealand sustained the increased frequency of cooking in the second half of the year, with Australia even cooking slightly more frequently.

New Zealand in particular stands out as having had a stable frequency of cooking throughout 2020 and compared to the previous year. While the robust government response to the pandemic meant strict lockdowns on foreign travel, the country only experienced roughly 2,000 cases of COVID-19 in 2020,[19] and the Secretary-General of the World Health Organization, Dr. Tedros Adhanom, has praised New Zealand's response to the COVID-19 pandemic.[20]

18 Fielding dates for the 10 countries repeated in 2020:

United States	March 16 to May 8, 2020	Aug. 4 to Oct. 9, 2020
Netherlands	March 11 to May 15, 2020	Sept. 10 to Dec. 14, 2020
Sweden	March 30 to April 29, 2020	Sept. 8 to Oct. 21, 2020
Australia	Feb. 4 to March 22, 2020	Nov. 2 to Dec. 15, 2020
New Zealand	Feb. 17 to March 23, 2020	Oct. 19 to Dec. 6, 2020
Finland	March 26 to May 13, 2020	Sept. 1 to Oct. 21, 2020
Malta	March 8 to April 24, 2020	Sept. 6 to Oct. 30, 2020
Norway	March 24 to May 4, 2020	Aug. 28 to Oct. 10, 2020
Portugal	March 20 to April 16, 2020	Sept. 14 to Oct. 21, 2020
Slovenia	March 13 to April 18, 2020	Sept. 24 to Nov. 9, 2020

19 Johns Hopkins data available at: https://github.com/CSSEGISandData/COVID-19
20 NZ Herald. (7, September 2020). Covid 19 coronavirus: World Health Organisation praises New Zealand's response. *NZ Herald.* Available from: https://www.nzherald.co.nz/nz/covid-19-coronavirus-world-health-organisation-praises-new-zealands-response/IDEQJDGRZEXLUW2HBODEQBVRRY/

Countries surveyed twice in 2020 — Meals cooked per week
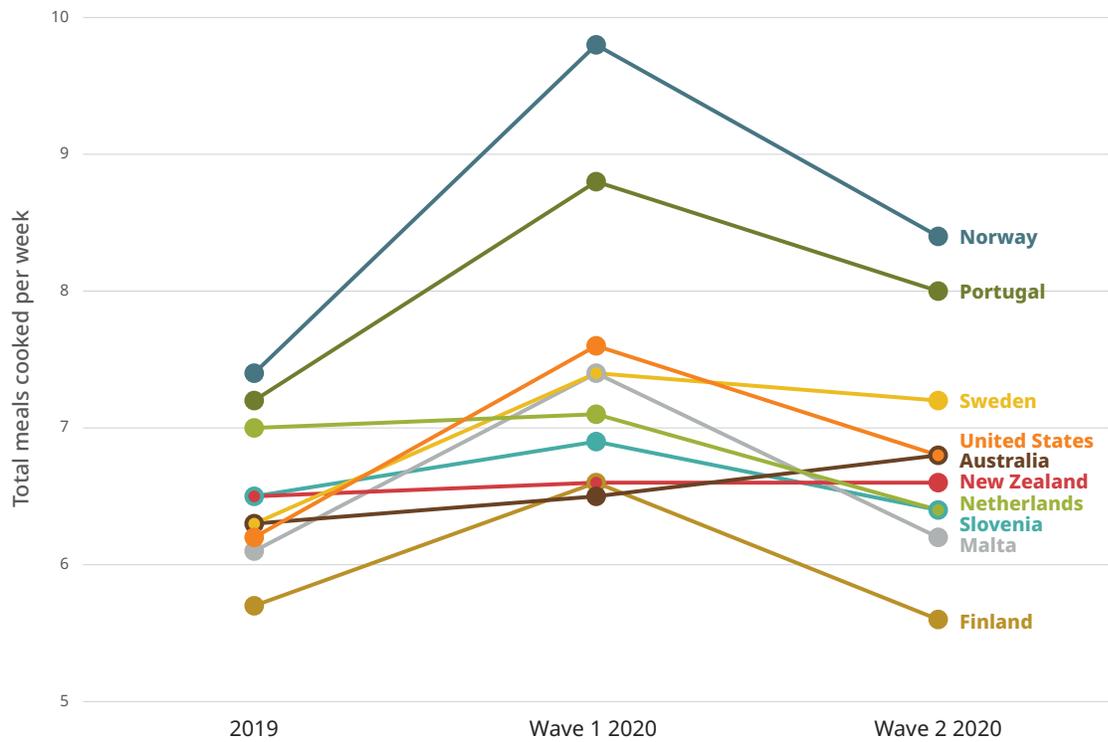
| All other countries saw the frequency of home-cooking fall in the latter part of the year.

Some remained at a higher level than in 2019, some returned to the same level and a few decreased in frequency. This suggests that while some behavior changes may continue past the end of the pandemic, home-cooking levels will likely return to pre-pandemic levels.

Consistent with the pattern observed in cooking at home, eating home-cooked meals saw a spike in early 2020 — especially in the countries with the biggest increases in home cooking. But in the second half of 2020, eating home-cooked meals in most countries had decreased by approximately one meal per week compared to earlier in the year.

However, in the United States, Norway and Sweden, the frequency was higher compared to 2019 levels even in the second half by approximately one meal (1.1, 0.9 and 0.8 additional home-cooked meals eaten per week compared to 2019, respectively).

Once again, Australia and New Zealand had different trajectories, with less stark changes in behaviors over the course of the year.

FIGURE 25

Countries surveyed twice in 2020 — Home-cooked meals eaten per week
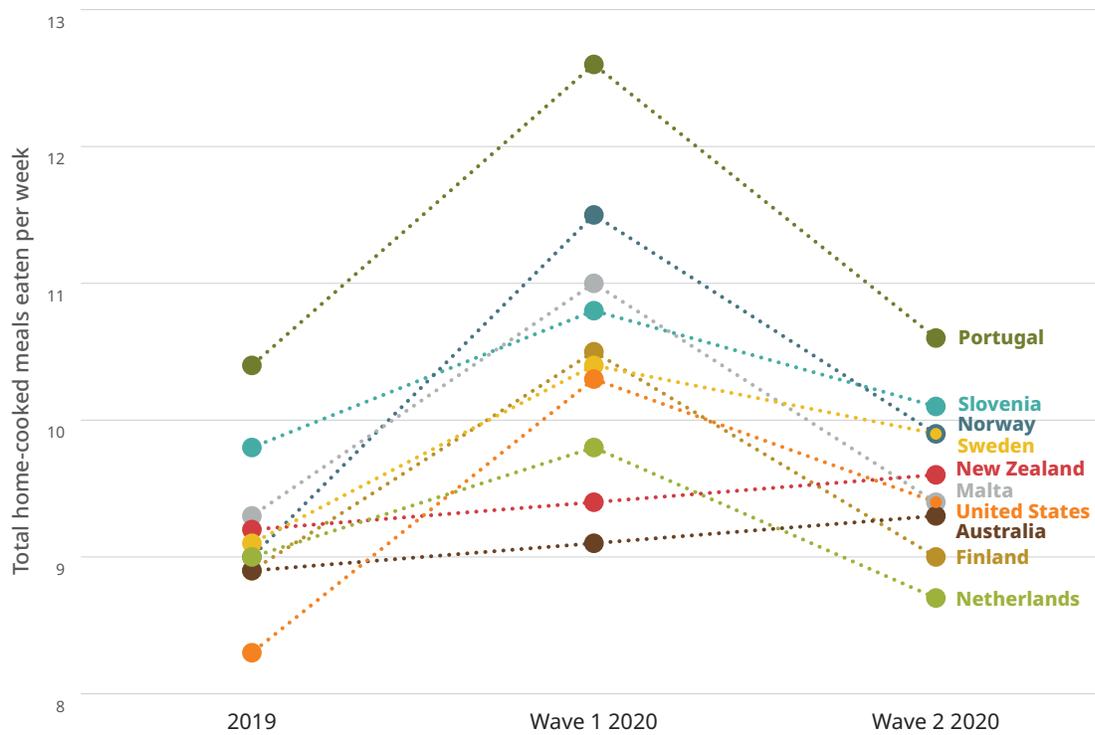
FOOD FOR THOUGHT:

Did people get tired of cooking during the pandemic?

A study of consumer survey data from the first lockdown period in Denmark, Germany and Slovenia[21] (between April and May 2020) found that the food categories with the highest rates of change were frozen food, canned food, and cake and biscuits — pre-made foods that aren't considered home cooking by the survey questions for this report. Combined with the two observations of data from the World Poll, this suggests that people in Slovenia — and possibly people in similar circumstances in the other countries — may have eased up on cooking at home as early as April 2020 after an initial spike in homemade meal preparation.

An NPR article from November 2020[22] — based on consumer surveys in the U.S. — remarked that "months into the coronavirus pandemic, the initial novelty of whipping up more homemade meals is fading."

21 Janssen, M., Chang, B. P. I., Hristov, H., Pravst, I., Profeta, A., & Millard, J. (2021, March 8). Changes in Food Consumption During the COVID-19 Pandemic: Analysis of Consumer Survey Data From the First Lockdown Period in Denmark, Germany, and Slovenia. *Frontiers in Nutrition, 8*. https://doi.org/10.3389/fnut.2021.635859

22 Al-Shalchi, H., & Garcia-Navarro, L. (2020, November 15). Once Enthusiastic, Americans' 'Cooking Fatigue' Simmers As Pandemic Drags On. NPR.org. Available from: https://www.npr.org/2020/11/15/932245085/once-enthusiastic-americans-cooking-fatigue-simmers-as-pandemic-drags-on

SECTION 3

Who cooked the most during the pandemic?

In this section:

- **Women continue to lead in frequency of home cooking in 2020** — despite cooking a little less than usual.

- **Men cooked slightly more in 2020.** In particular they cooked one more meal per week if they lived in a household with seven or more people or if they lost their job.

- But the gap between the frequencies with which women and men cook remains significant — **women cook twice as many meals per week** although they eat a similar number of home-cooked meals.

- 2020 also saw an increase in **household members cooking meals for women** — whether a spouse, a family member or a non-family member.

- These increases in someone else cooking at least once in the past week were the **largest in countries where women were already cooking the most**.

Prior to the pandemic, cluster analysis of the cumulative 2018 and 2019 data (focusing specifically on dinner habits) found that 40% of people — the "Stay-in-and-Cook" group predominantly made up of women who were older and lived in rural areas — frequently ate and prepared home-cooked dinners. This group included individuals who reported eating home-cooked dinners frequently — 93% said they ate a home-cooked dinner at home every day in the past seven days; likewise, the vast majority — 83% — said they cooked dinner every day in the past week.

Meanwhile the second most frequent group — 33% of people — fell into the "What's-for-Dinner" group and tended to be men. People in this group ate dinner at home often (83% having eaten the meal at home all seven days of the past week) but rarely cooked themselves, with nearly three-quarters (74%) saying they had cooked no days in the past week.

Stay-in-and-Cook group

93%
said they **ate a home-cooked dinner** at home every day in the past seven days

83%
said they **cooked dinner every day** in the past week

A Global Analysis of Cooking Around the World: Year 2

What's-for-Dinner group

83%
said they **ate dinner at home** all seven days of the past week

74%
said they had **cooked no days** in the past week

A Global Analysis of Cooking Around the World: Year 2
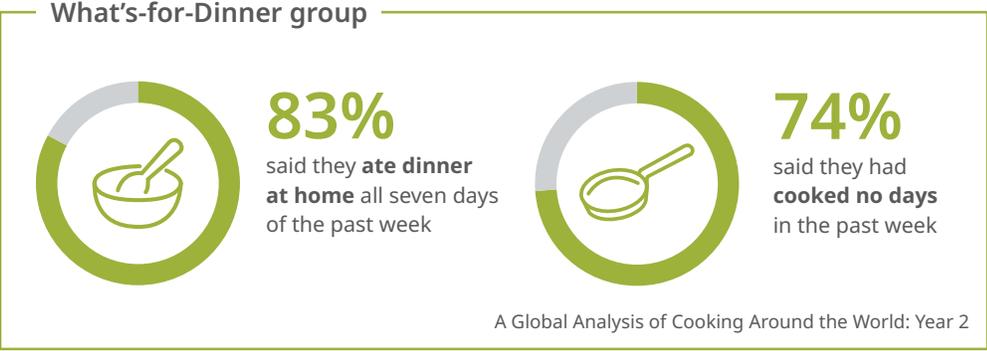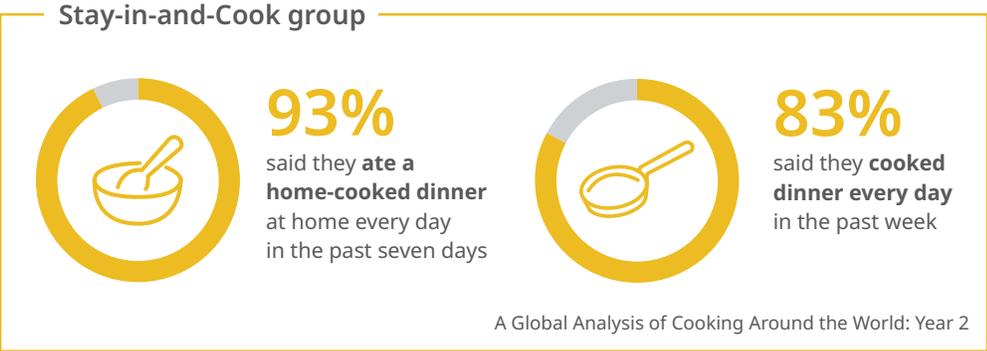
Gender difference in home cooking

On average women cooked 9.1 meals in 2020 — a slight decrease from 9.2 in 2019. Men, on the other hand, cooked 4.5 meals compared to 4.4 the year prior. This means that on average women cooked 4.6 meals more than men per week in 2020, compared to nearly five meals more than men in 2019.

However, difference in eating frequency between genders in 2020 was much smaller — both men and women ate more than nine home-cooked meals per week (9.4 and 10.3, respectively), although men ate 0.5 fewer meals than in 2019.

FIGURE 26

Change in cooking and eating home-cooked meals per week, by gender

● Total meals - Women 2019   ● Total meals - Women 2020
● Total meals - Men 2019   ● Total meals - Men 2020

Cooking

| Women | 9.1 ●● 9.2 |
| Men | 4.4 ● 4.5 |

Eating Home-Cooked Meals

| Women | 10.3 ●● 10.5 |
| Men | 9.4 ●—● 9.9 |
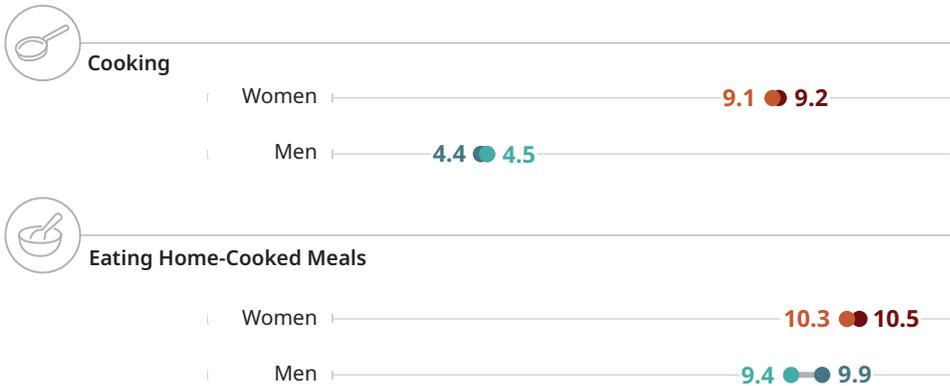
The data from China plays a part in the global average of meals cooked by gender. Women in China cooked 2.3 fewer meals per week (10.1 in 2019 to 7.8 in 2020) and men cooked 1.6 fewer meals per week (6.6 in 2019 to 5.0 in 2020).

> **In comparison, in the rest of the world (without China), women cooked 9.4 meals compared to 9.0 in 2019 and men cooked 4.4 meals compared to 3.8 in 2019.**

Looking at the total global population, women who live alone cooked one meal less for themselves per week in 2020 — from 8.8 down to 7.8 — and men who live alone also cooked 6.1 times compared 6.9 times in 2019. Meanwhile, in households with seven or more members, both women and men cooked approximately one extra meal per week in 2020. Despite this equal increase in cooking, the difference in overall cooking frequency nevertheless remained very large in households with seven or more members: women still cooked 9.5 meals compared to the 3.9 men cooked per week.

Men also tended to cook more than usual in 2020 if they had a college degree (4.6 in 2020 vs. 4.0 in 2019) and if they were employed part time, with no desire to work full time (5.4 vs. 4.3).

Both men and women who lost their job due to the pandemic in 2020 cooked more — resulting in approximately one more meal cooked per week than the average. But only women cooked substantially more if they worked fewer hours or if they were making less money as a result of the pandemic.

Women: Cooking frequency in 2020 compared to 2019

● Women: Total meals cooked per week 2019   ● Women: Total meals cooked per week 2020

Education

Completed elementary education or less	10.2 ● 10.2
Secondary education/some education beyond secondary	8.6 ● 8.7
Four years beyond high school and/or received a 4-year college degree.	7.5 ● 7.7

Urbanicity

A rural area or on a farm	10.0 ● 10.2
A small town or village	9.4 ● 9.4
A large city	8.4 ● 8.4
A suburb of a large city	8.0 ● 8.4

Household size

One person in household	7.8 ● 8.8
Two people in household	9.2 ● 9.8
Three to six people in household	9.1 ● 9.3
Seven or more people in household	8.4 ● 9.5

Employment

Employed full time for an employer	7.6 ● 7.6
Employed full time for self	9.6 ● 10.2
Employed part time, do not want full time	9.2 ● 9.4
Unemployed	9.2 ● 9.4
Employed part time, want full time	9.4 ● 10.0
Out of workforce	9.6 ● 9.6

FIGURE 28

Men: Cooking frequency in 2020 compared to 2019

● Men: Total meals cooked per week 2019   ● Men: Total meals cooked per week 2020

Education

Elementary education or less — 4.7 ●● 4.8

Secondary education/
Some education beyond secondary — 4.1 ●● 4.4

Four years beyond high school
and/or received a 4-year college degree — 4.0 ●—● 4.6

Urbanicity

A rural area or on a farm — 4.3 ●● 4.6

A small town or village — 4.4 ●● 4.7

A large city — 4.2 ●● 4.4

A suburb of a large city — 4.5 ●● 4.8

Household size

One person in household — 6.1 ●—● 6.9

Two people in household — 5.3 ●● 5.4

Three to six people in household — 3.9 ●● 4.3

Seven or more people in household — 2.9 ●—● 3.9

Employment

Employed full time for an employer — 4.1 ●● 4.2

Employed full time for self — 4.1 ● 4.1

Employed part time, do not want full time — 4.3 ●—● 5.4

Unemployed — 4.3 ●● 4.6

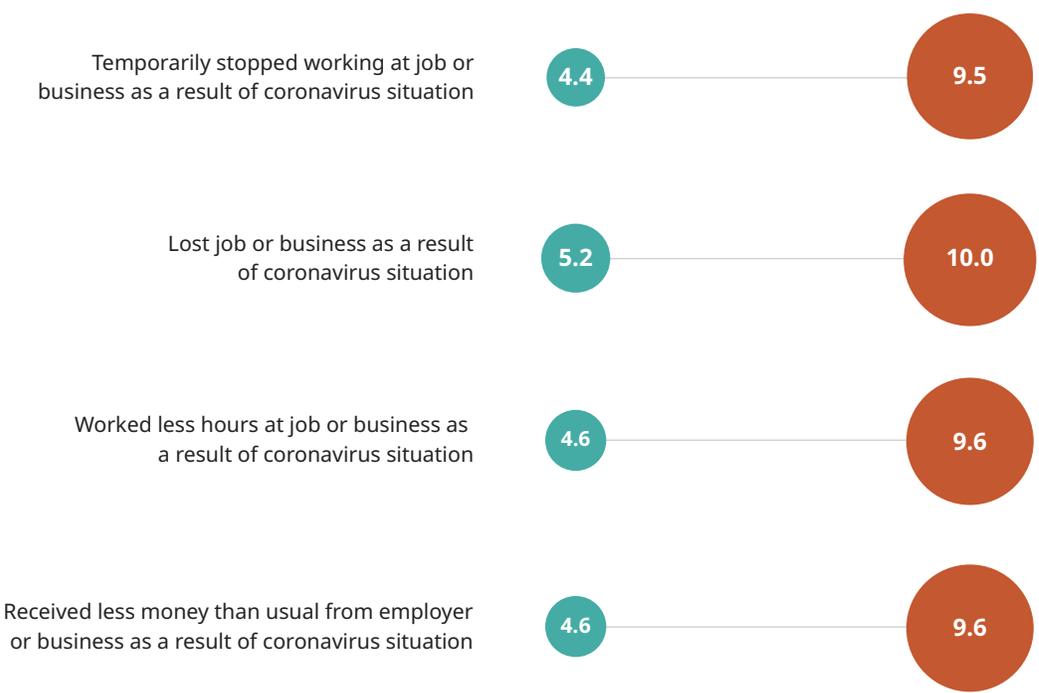Employed part time, want full time — 5.0 ●● 5.1

Out of workforce — 4.8 ●● 5.1

FIGURE 29

Cooking frequency based on impact of COVID-19

● Men: Total meals cooked per week 2020   ● Women: Total meals cooked per week 2020

Temporarily stopped working at job or business as a result of coronavirus situation   **4.4**   **9.5**

Lost job or business as a result of coronavirus situation   **5.2**   **10.0**

Worked less hours at job or business as a result of coronavirus situation   **4.6**   **9.6**

Received less money than usual from employer or business as a result of coronavirus situation   **4.6**   **9.6**

In every country surveyed, women cooked more meals on average compared to men. This is consistent with the 2018 and 2019 data. The gender gap in cooking frequency is widest in countries in the Commonwealth of Independent States and the Baltics, the Middle East and North Africa, and Asia. Countries with the least narrow gender gaps in terms of cooking frequency are high-income countries (based on the World Bank classification) where overall gender inequality is less.

Meals cooked per week by women vs. men in 2020

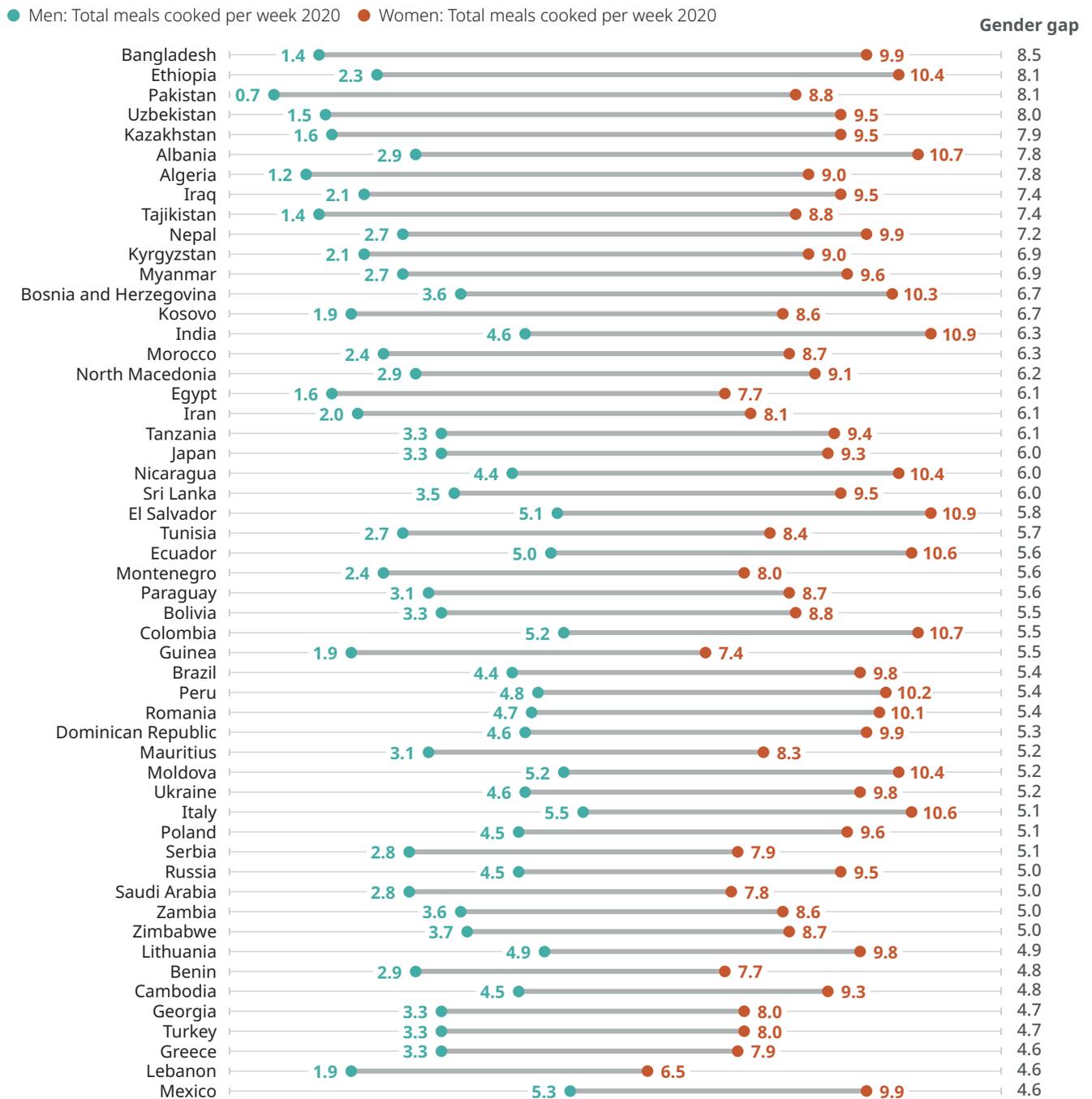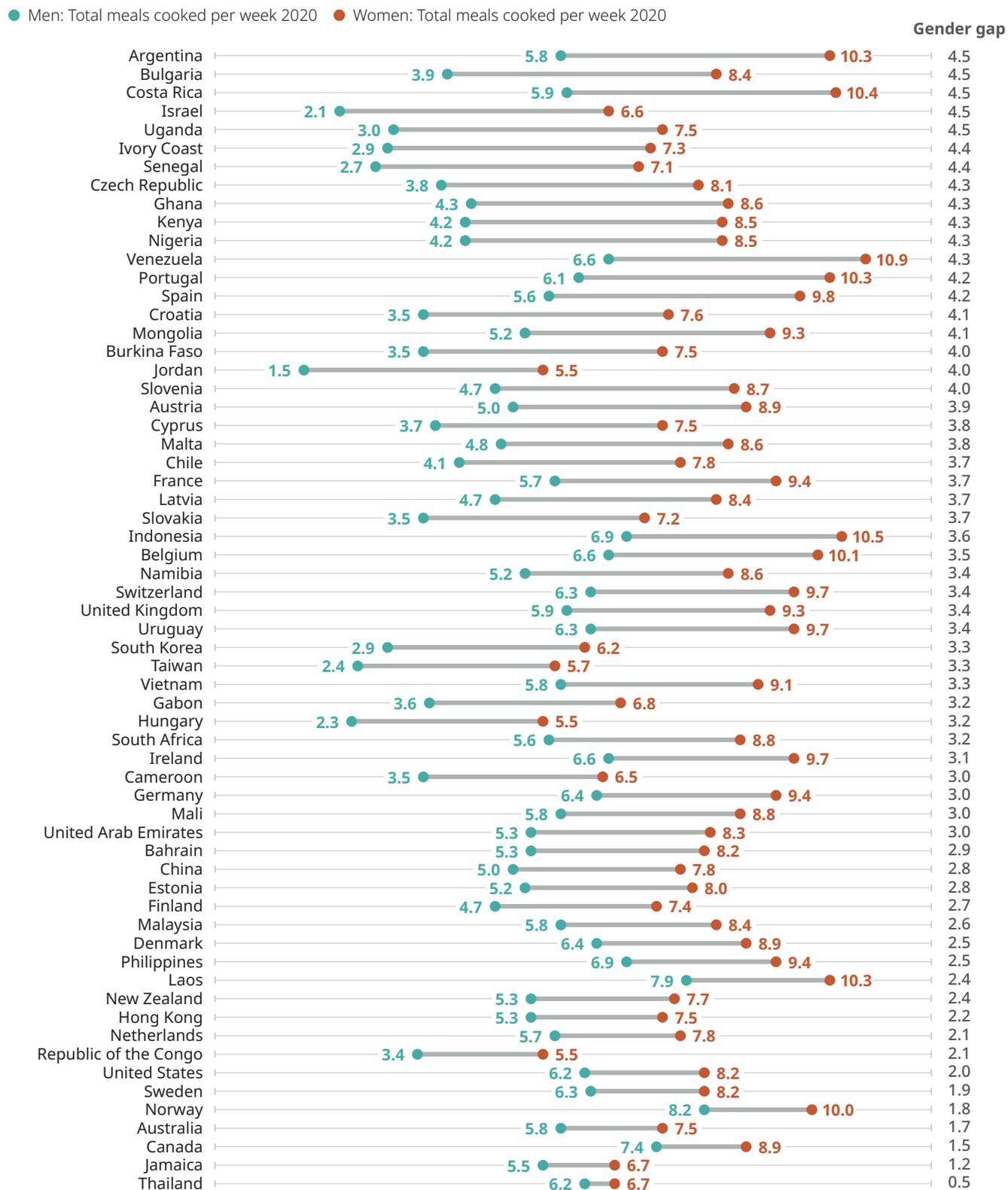● Men: Total meals cooked per week 2020   ● Women: Total meals cooked per week 2020

Gender gap

Country	Men	Women	Gender gap
Bangladesh	1.4	9.9	8.5
Ethiopia	2.3	10.4	8.1
Pakistan	0.7	8.8	8.1
Uzbekistan	1.5	9.5	8.0
Kazakhstan	1.6	9.5	7.9
Albania	2.9	10.7	7.8
Algeria	1.2	9.0	7.8
Iraq	2.1	9.5	7.4
Tajikistan	1.4	8.8	7.4
Nepal	2.7	9.9	7.2
Kyrgyzstan	2.1	9.0	6.9
Myanmar	2.7	9.6	6.9
Bosnia and Herzegovina	3.6	10.3	6.7
Kosovo	1.9	8.6	6.7
India	4.6	10.9	6.3
Morocco	2.4	8.7	6.3
North Macedonia	2.9	9.1	6.2
Egypt	1.6	7.7	6.1
Iran	2.0	8.1	6.1
Tanzania	3.3	9.4	6.1
Japan	3.3	9.3	6.0
Nicaragua	4.4	10.4	6.0
Sri Lanka	3.5	9.5	6.0
El Salvador	5.1	10.9	5.8
Tunisia	2.7	8.4	5.7
Ecuador	5.0	10.6	5.6
Montenegro	2.4	8.0	5.6
Paraguay	3.1	8.7	5.6
Bolivia	3.3	8.8	5.5
Colombia	5.2	10.7	5.5
Guinea	1.9	7.4	5.5
Brazil	4.4	9.8	5.4
Peru	4.8	10.2	5.4
Romania	4.7	10.1	5.4
Dominican Republic	4.6	9.9	5.3
Mauritius	3.1	8.3	5.2
Moldova	5.2	10.4	5.2
Ukraine	4.6	9.8	5.2
Italy	5.5	10.6	5.1
Poland	4.5	9.6	5.1
Serbia	2.8	7.9	5.1
Russia	4.5	9.5	5.0
Saudi Arabia	2.8	7.8	5.0
Zambia	3.6	8.6	5.0
Zimbabwe	3.7	8.7	5.0
Lithuania	4.9	9.8	4.9
Benin	2.9	7.7	4.8
Cambodia	4.5	9.3	4.8
Georgia	3.3	8.0	4.7
Turkey	3.3	8.0	4.7
Greece	3.3	7.9	4.6
Lebanon	1.9	6.5	4.6
Mexico	5.3	9.9	4.6

Meals cooked per week by women vs. men in 2020 (continued)

● Men: Total meals cooked per week 2020   ● Women: Total meals cooked per week 2020

Gender gap

Country	Men	Women	Gender gap
Argentina	5.8	10.3	4.5
Bulgaria	3.9	8.4	4.5
Costa Rica	5.9	10.4	4.5
Israel	2.1	6.6	4.5
Uganda	3.0	7.5	4.5
Ivory Coast	2.9	7.3	4.4
Senegal	2.7	7.1	4.4
Czech Republic	3.8	8.1	4.3
Ghana	4.3	8.6	4.3
Kenya	4.2	8.5	4.3
Nigeria	4.2	8.5	4.3
Venezuela	6.6	10.9	4.3
Portugal	6.1	10.3	4.2
Spain	5.6	9.8	4.2
Croatia	3.5	7.6	4.1
Mongolia	5.2	9.3	4.1
Burkina Faso	3.5	7.5	4.0
Jordan	1.5	5.5	4.0
Slovenia	4.7	8.7	4.0
Austria	5.0	8.9	3.9
Cyprus	3.7	7.5	3.8
Malta	4.8	8.6	3.8
Chile	4.1	7.8	3.7
France	5.7	9.4	3.7
Latvia	4.7	8.4	3.7
Slovakia	3.5	7.2	3.7
Indonesia	6.9	10.5	3.6
Belgium	6.6	10.1	3.5
Namibia	5.2	8.6	3.4
Switzerland	6.3	9.7	3.4
United Kingdom	5.9	9.3	3.4
Uruguay	6.3	9.7	3.4
South Korea	2.9	6.2	3.3
Taiwan	2.4	5.7	3.3
Vietnam	5.8	9.1	3.3
Gabon	3.6	6.8	3.2
Hungary	2.3	5.5	3.2
South Africa	5.6	8.8	3.2
Ireland	6.6	9.7	3.1
Cameroon	3.5	6.5	3.0
Germany	6.4	9.4	3.0
Mali	5.8	8.8	3.0
United Arab Emirates	5.3	8.3	3.0
Bahrain	5.3	8.2	2.9
China	5.0	7.8	2.8
Estonia	5.2	8.0	2.8
Finland	4.7	7.4	2.7
Malaysia	5.8	8.4	2.6
Denmark	6.4	8.9	2.5
Philippines	6.9	9.4	2.5
Laos	7.9	10.3	2.4
New Zealand	5.3	7.7	2.4
Hong Kong	5.3	7.5	2.2
Netherlands	5.7	7.8	2.1
Republic of the Congo	3.4	5.5	2.1
United States	6.2	8.2	2.0
Sweden	6.3	8.2	1.9
Norway	8.2	10.0	1.8
Australia	5.8	7.5	1.7
Canada	7.4	8.9	1.5
Jamaica	5.5	6.7	1.2
Thailand	6.2	6.7	0.5

Who else cooked?

When asked who else cooked meals that were not cooked personally by the respondent, 2020 saw some interesting changes compared to 2019.

In 2020, 84% of men reported their spouse cooked a meal for them compared to 41% of women. But on average there was a six-percentage-point increase in women saying that their spouse cooked a meal for them. In some countries, the increase was as much as 20 to 56 percentage points — notably for the most part in majority-Muslim countries and countries where previous data had shown that women cooked substantially more.

Men on average did not report an increase in their spouse cooking them a lunch or dinner in 2020. But Jamaican men were the standout exception — they were 21 percentage points more likely to say their spouse cooked them lunch and 12 percentage points more likely to say their spouse cooked them dinner.

In Belgium both women and men were more likely to say their spouse cooked them lunch, with women reporting twice as much of an increase as men.

Women in Bahrain, Thailand, Benin, Indonesia, India, Saudi Arabia and the Philippines reported the largest increases in other family members cooking meals either at lunch or dinner in their home. But men from some countries in Europe and the Commonwealth of Independent States and the Baltics — Hungary, North Macedonia, Montenegro, Bosnia and Herzegovina, and Poland — had the greatest increases in saying a family member cooked them lunch or dinner, perhaps while visiting with family or rather than going out in the evenings during the pandemic.

Reported rates of eating meals prepared by non-family members remained low globally: On average only 13% of men and 11% of women reported having done so in the past seven days. But in some countries, people relied on non-family members more during the pandemic for their meals, with similar rates for both men and women. This was most common in Cameroon, Vietnam, the United Arab Emirates, Laos, Nigeria, Cambodia, Thailand, Namibia and India.

Please tell me whether any of the following people COOKED any of those LUNCHES/DINNERS AT YOUR HOME in the past 7 days?

- (if married:) Your spouse/partner

- A family member/(if married:) Some other family member

- Some other person who is not a family member

Top 10 countries by percentage-point change in who else cooked meals in 2020 compared to 2019, by gender

SPOUSE

Spouse of female cooked lunch in 2020 compared to 2019		Spouse of female cooked dinner in 2020 compared to 2019		Spouse of male cooked lunch in 2020 compared to 2019		Spouse of male cooked dinner in 2020 compared to 2019	
Jordan	56+	Jordan	52+	Jamaica	21+	Namibia	19+
Lebanon	46+	Lebanon	41+	Hong Kong	19+	Saudi Arabia	14+
Saudi Arabia	43+	Iraq	38+	Namibia	18+	Paraguay	13+
Mali	35+	Saudi Arabia	34+	Cambodia	10+	Jamaica	12+
Iraq	31+	Cambodia	29+	Belgium	10+	Zimbabwe	10+
Algeria	28+	Algeria	28+	Uganda	9+	Bolivia	10+
Cambodia	24+	Mali	27+	Paraguay	9+	Canada	9+
Paraguay	24+	Paraguay	26+	Tajikistan	8+	Cameroon	9+
Thailand	22+	Chile	23+	Kosovo	8+	Hong Kong	8+
Belgium	21+	Turkey	20+	Japan	8+	Venezuela	8+

OTHER FAMILY

Other family of female cooked lunch in 2020 compared to 2019		Other family of female cooked dinner in 2020 compared to 2019		Other family of male cooked lunch in 2020 compared to 2019		Other family of male cooked dinner in 2020 compared to 2019	
Thailand	24+	Bahrain	23+	Hungary	21+	Hungary	20+
Benin	19+	Thailand	22+	Malaysia	16+	North Macedonia	15+
Indonesia	18+	Benin	22+	China	15+	China	14+
India	17+	Indonesia	21+	Saudi Arabia	14+	Montenegro	13+
Philippines	17+	India	17+	Bosnia and Herzegovina	14+	Bosnia and Herzegovina	13+
Bahrain	15+	Saudi Arabia	17+	Bangladesh	13+	Saudi Arabia	13+
Turkey	15+	Philippines	15+	Thailand	12+	Sri Lanka	13+
Kenya	14+	Hungary	14+	South Korea	12+	Malaysia	12+
Bangladesh	14+	Tanzania	14+	Poland	12+	Bangladesh	11+
Saudi Arabia	13+	Jamaica	14+	Montenegro	12+	Iran	10+

FIGURE 31

Top 10 countries by percentage-point change in who else cooked meals in 2020 compared to 2019, by gender (continued)

OTHER NON-FAMILY

Other non-family of female cooked lunch in 2020 compared to 2019		Other non-family of female cooked dinner in 2020 compared to 2019		Other non-family of male cooked lunch in 2020 compared to 2019		Other non-family of male cooked dinner in 2020 compared to 2019	
Cameroon	**16+**	Vietnam	**16+**	Laos	**19+**	Laos	**15+**
Vietnam	**15+**	Laos	**14+**	Indonesia	**17+**	Bangladesh	**11+**
United Arab Emirates	**15+**	Cameroon	**12+**	Thailand	**12+**	Thailand	**11+**
Laos	**14+**	India	**11+**	Bangladesh	**12+**	Ecuador	**11+**
Nigeria	**11+**	Saudi Arabia	**10+**	Vietnam	**11+**	Lithuania	**11+**
Cambodia	**10+**	Cambodia	**10+**	Tanzania	**11+**	Cameroon	**11+**
Gabon	**9+**	United Arab Emirates	**10+**	Nigeria	**10+**	Indonesia	**11+**
Thailand	**9+**	Iraq	**10+**	Cameroon	**10+**	Ivory Coast	**11+**
Namibia	**9+**	Thailand	**10+**	Cambodia	**9+**	Iraq	**10+**
India	**9+**	Guinea	**9+**	Slovakia	**9+**	United Arab Emirates	**8+**

Conclusions

The last three years have presented an incredible opportunity to study cooking around the world. In 2019, certain countries already stood out in terms of telling a story of how daily routines can be disrupted by external forces and make cooking and eating home-cooked meals a more frequent part of people's lives. What we couldn't have expected is that a global pandemic would disrupt the lives of the people in our study yet again in 2020.

> The pandemic brought with it major anxieties around health, finances and child rearing — to name a few — but it also afforded an opportunity for families to spend more time at home and eat together. But this didn't affect cooking and eating home-cooked meals the way we may have expected.

Some countries and households around the world already cooked at home most of the time and certain types of people were already doing most of the cooking. We see that there was little room for new habits when cooking was already such a prevalent part of daily life, but nonetheless some new home cooks made an appearance in the kitchen.

One thing that stayed the same was that women continued to cook twice as many weekly meals as men, even though men cooked more than in previous years. Despite women reporting other people cooking meals for them more than ever before, this did little to close the gap.

On the other hand, households in countries that ate at home more rarely before the pandemic were adjusting to many disruptions — and not just to their cooking and eating habits. People in wealthier countries and the richest groups within countries cooked more in 2020. But we also have reason to believe that spikes in cooking and eating home-cooked meals early in the pandemic were not sustained throughout 2020 even though more meals were cooked at home overall than in the previous year.

Across the world, a third of people lost their jobs or businesses and about half saw their hours or wages cut. When this happened, they tended to cook more often. But among the poorest quintiles in each country, people were less likely to cook and eat home-cooked meals in 2020 if they were affected in some way by the pandemic, which could have troubling explanations.

These patterns give us much food for thought as to why we didn't see major gains in cooking around the world in 2020.

1   In terms of cooking frequency, what types of modifications can truly spur change?

2   Why did countries like China and Indonesia experience such major shifts in 2020, but in opposite directions?

3   What types of situations can lead to a reduction in the gender gap in cooking?

4   What made people seemingly lose interest in cooking over the course of 2020?

5   What can we learn from cooking patterns about how people struggle with undernourishment and food scarcity?

> **More broadly, the goal should be to understand the benefits that cooking brings to people's lives and also move the conversation beyond the benefits to the individual and help people understand the ways in which cooking can benefit communities and the environment.**

Looking ahead, the survey is again in the field and will continue to build on the findings uncovered so far to shed light on the role cooking plays in our daily lives.

Methodology

This survey was included as a module within the Gallup World Poll in 2020. Since 2005, the World Poll has regularly surveyed people in more than 160 countries using mixed methods of telephone and face-to-face interviewing. In a typical year, the poll results represent more than 95% of the world's population aged 15 and older, using randomly selected, nationally representative samples.

However, 2020 was far from a typical year. The unprecedented challenges presented by the coronavirus pandemic forced Gallup to pause its global data collection in March 2020 to thoroughly assess risk and prepare contingency plans for data collection. By May, the continued prevalence of COVID-19 made it clear that there was too much risk of community transmission to conduct face-to-face data collection in 2020. Nonetheless, Gallup recognized the importance of finding a way to collect representative, high-quality data during this critical period and prepared a contingency methodology. This new methodological approach was driven by several key considerations, including the safety of Gallup World Poll interviewers and respondents and retaining high levels of representativity. Ultimately, the 2020 survey was conducted primarily by phone (Computer-Assisted Telephone Interviewing — CATI) in nearly all of the 116 countries and territories — representing more than 93% of the global aged 15 and older population — with the exception of the Republic of the Congo, Mali, Pakistan and Senegal.

As a standard practice, Gallup and its partners complied with all government-issued guidance from local authorities and took this guidance into account throughout the interviewing process, including following social distancing measures for telephone interviews conducted in a call center (however, most CATI data collection was done remotely).

Questionnaire translation

The questionnaire was translated into the major conversational languages of each country and area (autonomous or semi-autonomous regions or territories that are not recognized as sovereign states).

The survey was originally developed in English. From this starting point, Gallup translators produced several master-language questionnaires in French, Spanish, Portuguese, Russian and Arabic (using one of the two translation methods described on the following page, as deemed appropriate by the Gallup World Poll Regional Directors). Then, local language translations were performed from the master-language version. For example, the Russian master-language questionnaire was created first (translation from English to Russian), then was translated from Russian into other languages such as Ukrainian, Kyrgyz and Uzbek.

As a key component of quality assurance, one of the following two methods was used in each country as an independent check of every questionnaire translation:

Method 1: Two independent translations are completed. An independent third party with some knowledge of survey research methods adjudicates the differences. A professional translator translates the final version back into the source language.

Method 2: A translator translates into the target language, and an independent translator back-translates into the source language. An independent third party with knowledge of survey methods reviews and revises the translation as necessary.

Professional translators — experienced in translating survey questionnaires and who have typically worked for years with Gallup's local data collection network (local translators) — were selected. All translators received the same set of notes and guidance regarding the meaning of specific items. Interviewers were instructed to follow the interview script and not to deviate from the translated language.

Interviewer training and quality control

As a standard practice, Gallup and its data collection partners were mindful of complying with all government-issued guidance from local authorities and took this guidance into account throughout the interviewing process, including following social distancing measures for telephone interviews.

Gallup selects and retains in-country partners based on their experience in nationwide survey research studies in the mode that is typically appropriate for that country, and Gallup continued to use data collection partners when fielding this survey. Gallup conducted all training remotely using available technologies such as e-learning and video conferencing. The changes were largely necessary to address the lack of telephone data collection experience, technical and infrastructural limitations, and compressed timelines.

Gallup provided a standardized training manual to assist the fieldwork team with training and ensure consistency and structure.

Topics covered in training included:

1) Standards for conducting a quality interview
   - how to ask closed-ended questions
   - how to ask open-ended questions
   - rotation of survey questions or response options
   - how to follow or implement skip patterns
   - probing

2) Respondent selection and disposition coding (i.e., recording the results of each contact)
   - within-household selection for those reached on landline and on mobile in countries where telephone coverage is low
   - coding practices for each telephone attempt
   - sample release and management

3) Recruitment and retention of interviewers and field quality control
   - characteristics of a successful interviewer/motivation for retention
   - requirements for setting up remote data collection
   - monitoring sample performance and interviewer productivity

Sampling and data collection methodology

All samples were probability-based — meaning respondents were selected randomly — and nationally representative of the aged 15 and older population. As all eligible landline exchanges and valid mobile service providers were included, the coverage area is an entire country, including rural areas. The sampling frame represents adults aged 15 and older with access to a phone (either landline or mobile). Gallup used random-digit-dialing (RDD) or a nationally representative list of phone numbers.

How the sample generation/selection process works

Due to the immense challenges presented by the coronavirus pandemic, interviewing for this survey was conducted solely by telephone. In some countries, Gallup and its data collection partners contacted respondents on landline or mobile telephones; in a small but growing number of countries, respondents were contacted by mobile phone only.

Regardless of the approach, how were potential survey participants identified and contacted? This process is known, in technical terms, as sample generation and selection. The general idea is straightforward: Gallup and its data collection partners must first establish a list of all potential participants (known as the sampling frame) and then use random-based methods to contact individuals from that frame. In 2020, this process worked as follows:

1) In any given country, the first step was to construct the landline and/or mobile frames using either True RDD or List-Assisted RDD (explained below).

2) Second, telephone numbers were drawn using random processes. This is done by drawing a seed (typically an exchange) using a simple random sample and then a random number (4-6 digits long) is appended to create a random telephone number.

> a) Generally, the mobile frame is constructed using pure RDD, where all assigned exchanges (based on information from the Telecom authority) by mobile service providers are used to generate the frame of all possible mobile numbers. The exchanges are used as seeds and a random number of the appropriate length (depending on the country, this could be anywhere from 4-6 digits) is added to the seed to generate a random telephone number. As mobile exchanges are assigned to service providers, the frame is stratified explicitly by mobile service provider. Within each stratum, a fixed sample of telephone numbers (sample size is determined by market share of the service provider, expected working rate and response rate) is selected using a simple random sample. In countries where Gallup has information on differential response or working rates by service provider, that information is taken into account while determining the sample size to draw from each service provider.

> b) In the case of landline using True RDD, the frame is constructed similarly using assigned exchanges to each geography/region (instead of service provider) based on information provided by the Telecom authority as seeds and generating all possible numbers first, then selecting a fixed sample size (using a simple random sample within each stratum), which is estimated based on population size in each region and estimated working/response rate. The difference between the True RDD approach to constructing the frame and List-Assisted RDD is how the initial seeds are generated. In the List-Assisted approach, the frame is constructed by accessing various publicly available list sources that provide a comprehensive list of valid exchanges. The more sources accessed, the more comprehensive the frame. Unique exchanges identified from these sources form the seed for the random number generation process. Due to the nature of the frame generation process, List-Assisted RDD has a higher working rate because exchanges in the frame come from public list sources and therefore tend to be more active.

Traditional telephone countries

Gallup typically uses dual-frame (landline and mobile telephone) Computer-Assisted Telephone Interviewing (CATI) as the mode of data collection in Northern America, Western Europe, wealthy Asian and Pacific countries or territories including Japan, Australia, New Zealand, Taiwan and Gulf Cooperation Council (GCC) countries. Due to limited landline usage, the sampling frame is mobile-telephone-only in a growing number of countries (e.g., Libya, Finland and UAE). The split between expected landline and mobile completes in a dual-frame design is based on the information Gallup has on landline and mobile use in those countries from past surveys and other secondary data, as well as the demographic distribution of the final landline/mobile sample in relation to targets. There were no other changes to the design, stratification or execution of the telephone list samples in traditional telephone countries in 2020.

In traditional telephone countries and areas, respondent selection followed the same procedure as in previous years:

- For respondents contacted by landline, random respondent selection was performed within the household (among eligible respondents aged 15 and older), either by asking for the person aged 15 or older who has the next birthday or randomly selecting a respondent from a list of all eligible household members (as provided by the person Gallup originally contacted).

- For respondents contacted by mobile telephone, no further selection was performed (other than confirming the respondent was at least 15 years of age).

Thirty-two of the 116 countries and territories included in this survey were traditional telephone countries — meaning, the mode of interviewing did not change in 2020 compared with the last year Gallup interviewed there. In these countries, the coverage error (percentage of target population not accessible for sampling) remains negligible according to Gallup estimates — typically, no more than 1% of the 15 and older population.

New telephone countries

In countries and territories where interviews were conducted by telephone for the first time (i.e., previously face-to-face countries in Central and Eastern Europe, Latin America, former Soviet states, developing Asia, the Middle East and Africa), Gallup used one of two methods:

- dual-frame (landline and mobile telephone) RDD, where landline presence and use are 20% or higher based on historical Gallup estimates

- mobile telephone RDD in countries with limited-to-no landline presence (<20%)

To ensure greater transparency and control over the sampling process, RDD samples for all the new telephone countries, except Israel and Uzbekistan, were purchased from Sample Solutions Europe. Stratification of landline frame was by geography and, where market share information for mobile service providers was known, the mobile frame was explicitly stratified by the service providers, and sample drawn was proportional to the market share.

In new telephone countries with combined landline/mobile telephone coverage of 80% or higher, these same respondent selection procedures were applied: For respondents contacted by landline telephone, random respondent selection was performed within the household (among eligible respondents aged 15 and older), either by asking for the person aged 15 or older who has the next birthday or randomly selecting a respondent from a list of all eligible household members. For respondents contacted by mobile telephone, no further selection was performed (other than confirming the respondent was at least 15 years of age).

In new telephone countries with low combined landline/mobile telephone coverage (below 80%), random respondent selection within the household (among eligible household members aged 15 and older) was performed, regardless of if the respondent was contacted by landline or mobile telephone. The decision to include both modes (landline and mobile) in random respondent selection, rather than landline only, was made to increase coverage and representation of individuals in these countries who are less likely to own a mobile phone themselves but have access to such a device through someone else in their household.

The majority of countries included in this survey were new telephone countries. According to Gallup estimates, the coverage expected is 90% or greater for most countries.[23] In some nations, such as Russia or China, the coverage is estimated closer to 95%.

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23 Gallup estimates that coverage may be less than 80% in a limited number of countries, including Ethiopia, Zambia or Venezuela. Gallup estimates of coverage error primarily come from 2019 World Poll data collected in previously face-to-face countries. Gallup estimated what percentage of the 15+ population had access to a landline or mobile phone. In several countries, Gallup enhanced those estimates with additional information from recently conducted large-scale, face-to-face surveys such as Demographic and Health (DHS) and, in some cases, more recent United Nations Telecommunication Development Sector (ITU-D) estimates.

This under-coverage — though unavoidable, given the scope of the public health challenges in 2020 — may have implications for the underlying sample composition in some countries (i.e., the overall demographic profile of all respondents interviewed in a nation). In many nontraditional telephone countries, samples skewed toward specific demographic characteristics, often — though not always — toward more educated, younger individuals. To help adjust for these imbalances, Gallup (where it considered necessary) relied on an expanded set of demographic factors when calculating post-stratification weights (further discussed in "Data weighting").

Scripting and testing

Local data collection partners continue to program the surveys in traditional telephone countries, and Gallup continues to test them for accuracy prior to launch.

To ensure consistency in survey programming, Gallup used one of two methods in each new telephone country. Using their own CATI data collection platform, local data collection partners prepared their own script and provided Gallup with links to test the program logic and generate synthetic data used to confirm that the questionnaire was programmed correctly. For the remaining countries, Gallup scripted all the country surveys on a single platform (SurveyToGo) and tested them before making them available to local data collection partners.

Response rates

As is the case with Gallup World Poll surveys more generally, response rates for this survey varied considerably across countries. In general, response rates are lower in countries where interviewing is conducted by telephone than in-person countries, though in many countries and territories where telephone interviewing is used, response rates are comparable to those of other polling firms.

The Gallup World Poll does not publish individual country response rates.

Data weighting

Data weighting is used to minimize bias in survey estimates and is intended for use in generating nationally representative estimates within a country. The weighting procedure was formulated based on the sample design and performed in multiple stages.

Gallup constructed a probability weight factor (base weight) to account for selection of telephone numbers from the respective frames and correct for unequal selection probabilities that result from selecting one adult in landline households and for dual users coming from both the landline and mobile frame. For instance, an individual in a five-person household will have a lower probability of selection than someone who lives alone, holding everything else equal. The data weighting process seeks to address this type of imbalance.

Adjustment to selection probabilities reflecting the relative frame sizes was a new improvement to the weighting process in 2020 and was implemented in all telephone countries, regardless of if the country was a traditional or nontraditional telephone country.

Next, the base weights were post-stratified to adjust for nonresponse (where selected respondents are never reached or refuse to participate) and to match the weighted sample totals to known target population totals obtained from country-level census data. Gallup made calibration adjustments for gender, age and, where reliable data were available, education. In many nontraditional telephone countries, weights were also adjusted on an additional set of demographic factors, including employment status (whether employed for an employer/self or not employed), urbanicity, region or some combination of these factors. In general, countries with lower coverage of the target population required a larger set of weighting variables than countries with a minimum amount of coverage error.

Where necessary, Gallup implemented procedures to limit or reduce the number and size of extreme sampling weights. This process was done in both stages of the data weighting process.

In any given country, the unweighted demographic profile (including but not limited to characteristics such as gender, age group, educational attainment level, employment status and region) was compared against reliable statistics (typically census data from the national government); Gallup also compared the final weighted sample to these statistics.

Finally, approximate study design effect and margin of error were calculated (calculations are presented in Figure 32). The design effect calculation reflects the influence of weighting on sampling variance compared to a simple random sample of the same size.

Sampling error/Precision of estimates

When interpreting survey results, all sample surveys are subject to various types of potential errors. For example, errors may occur due to nonresponse (where selected respondents are never reached or refuse to participate), interviewer administration error (where a response can be mistyped or misinterpreted by the interviewer) or incomplete or inaccurate answers from the respondent.

The sampling design employed in this study was used to produce unbiased estimates of the stated target population. An unbiased sample will have the same characteristics and behaviors as those of the total population from which it was drawn. In other words, with a properly drawn sample, we can make statements about the target population within a specific range of certainty. Sampling errors can be estimated, and their measures can help interpret the final data results. The size of such sampling errors depends largely on the number of interviews and the complexity of the sampling design.

The margin of error (MOE), or the level of precision used in estimating the unknown population proportion "P," can be derived based on the following formula:

$$MOE = 1.96 * \sqrt{P*(1-P)/n}$$

where "n" is the sample size (i.e., the number of completed surveys). Under the most conservative assumption (P = 0.5), the MOE for a sample size of 1,000 will be 1.96 * $\sqrt{0.25/1000}$ = 3.1 percentage points under the assumption of simple random sampling.

Figure 32 shows the size of the margin of error associated with the 95% confidence interval for various sample sizes under the assumption of simple random sampling. They may be interpreted as indicating the approximate range (plus or minus the figure shown) around the point estimate within which the results of repeated sampling in the same time period could be expected to fall 95% of the time, assuming the same sampling procedures, interviewing process and questionnaire. For any given sample size, the estimated precision is lowest when P = 0.5 (or 50%). For example, the sample size needed to ensure a sampling error (or half-width of confidence interval) of 0.05 at 95% confidence level is around 400 cases when P = 0.5 (or 50%). A sample size of 300 will produce a sampling error close to 0.057 at 95% level of significance when P = 0.5 (or 50%). With P = 0.4 (or 40%), a sample size of 300 will produce a sampling error of 0.056. Figure 32 shows estimated precision levels for different values of P and sample sizes under the assumption of simple random sampling.

FIGURE 32

Margin of error associated with 95% confidence interval for percentages for entire sample or subgroups, in percentage points

| Sample sizes near | For percentages near | | | | | |
	5/95% ±	10/90% ±	20/80% ±	30/70% ±	40/60% ±	50/50% ±
400	2.1	2.9	3.9	4.5	4.8	4.9
500	1.9	2.6	3.5	4.0	4.3	4.4
600	1.7	2.4	3.2	3.7	3.9	4.0
800	1.5	2.1	2.8	3.2	3.4	3.5
1,000	1.4	1.9	2.5	2.8	3.0	3.1
1,500	1.1	1.5	2.0	2.3	2.5	2.5
2,000	.96	1.3	1.8	2.0	2.1	2.2
2,500	.85	1.2	1.6	1.8	2.0	2.0
3,000	.78	1.1	1.4	1.6	1.8	1.8
4,000	.68	.93	1.2	1.4	1.5	1.5
5,000	.60	.88	1.2	1.3	1.3	1.4

While the previous figure reflects precision assuming simple random sampling (i.e., respondents within a target population have an equal probability of being selected for the survey), World Poll surveys rely on more complex designs, even for telephone samples (which was the sole mode of data collection in 2020). In addition to design complexities, data are weighted to correct for unequal probabilities of household selection and post-stratification adjustments. This weighting process introduces a design effect that needs to be considered while computing the sampling error (or precision) of the estimates. The design effect is defined as the ratio of the complex, design-based sample variance to the sample variance obtained from a simple random sample of the same size. To calculate the precision of an estimate using the complex sampling design with a design effect, one must multiply the precision under the assumption of simple random sampling by the square root of the design effect associated with this estimate.

In other words, the precision of an estimate (p) of an unknown population proportion "P" may be approximated as:

$$\text{Precision (p)} = \{\text{SQRT (Deff)}\} \times \text{SE(p)}$$

where "Deff" is the design effect associated with the estimate (p)

$$\text{SE(p)} = \text{SQRT}\{p*(1-p)/(n-1)\}$$

n = the unweighted sample size

For purposes of simplicity, an estimate of "Deff_wt" is provided for each country, taking into consideration only the variability of weights. A design effect of 1 means the effective sample size is the same as the nominal sample size, which is 1,000 for most countries in the World Poll. For proportions close to 50%, a design effect of 2 reduces the effective sample size by 50% or increases margin of error by 41% compared to a simple random sample of size 1,000.

Data analysis methodology

The analysis in this report sought to answer the critical research questions that motivated this study. In some instances, this entailed reporting on the topline results for each country and area in the study; however, more complex data analysis techniques often were required to better understand why and how cooking differed across the world or parts of the world, or within a certain population. This section explores the analytical tools and techniques employed in this analysis.

Country groupings used in this analysis

As the survey was fielded in 116 countries and territories, findings are often reported in various cross-national groupings to help illustrate the global variation of results without overburdening the reader by presenting data points from 116 different countries and territories. The major types of country groupings used in this report are regional and country income breakdowns.

Regional groupings used in this report

In analyzing the results from 116 countries and territories, this report uses the following regional groupings:

REGION	COUNTRIES
Asia	Australia, Bangladesh, Cambodia, China, Hong Kong, India, Indonesia, Japan, Laos, Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, South Korea, Sri Lanka, Taiwan, Thailand, Vietnam
Commonwealth of Independent States and the Baltics	Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Ukraine, Uzbekistan
Europe	Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Kosovo, Malta, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom
Latin America	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Uruguay, Venezuela
Middle East and North Africa	Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Lebanon, Morocco, Saudi Arabia, Tunisia, Turkey, United Arab Emirates
Northern America	Canada, United States
Sub-Saharan Africa	Benin, Burkina Faso, Cameroon, Ethiopia, Gabon, Ghana, Guinea, Ivory Coast, Jordan, Mali, Mauritius, Namibia, Nigeria, Republic of the Congo, Senegal, South Africa, Tanzania, Uganda, Zambia, Zimbabwe

Presentation of cross-country results

All results presented at a combined-country level — such as by region, country income level or at the overall (i.e., "global") level — were weighted by the aged 15 and older population size of the countries included in the analysis. This process gives more populated countries more weight than less populated countries.

For example, China has the largest population of the 116 countries included in the survey. China's aged 15 and older population represents about 22% of the total 15 and older population across the countries and areas surveyed, according to the national census figures Gallup used in its sampling and weighting processes. Thus, when presenting global estimates in this report, respondents from China were given a greater weight — that corresponds to their share of the population — in determining the final calculation.

Standardization of income, education and employment groups

Personal information such as income, education and employment can be defined or measured differently across countries, which can create challenges when attempting to compare cross-country results.

For this reason, the report examined these characteristics using standardized definitions of income and education (shown below) that have been developed by the Gallup World Poll. Additionally, employment status was defined in a manner consistent with the Bureau of Labor Statistics in the United States.

Country income level

Countries were divided into four income groupings, as defined by the World Bank:

- **Low income:** Gross national income (GNI) per capita of $1,035 or less (in 2019)

- **Lower middle-income:** GNI per capita of $1,036 to $4,045

- **Upper middle-income:** GNI per capita of $4,046 to $12,535

- **High income:** GNI per capita above $12,535

Education

Countries have unique ways of classifying education levels, and these classifications need to be preserved during data collection for weighting purposes. However, to make comparisons across countries by educational attainment, consistent categories needed to be created. All education descriptions can be placed within three categories: primary, secondary and tertiary. All responses regarding education were coded into their relevant category for global comparison.

- **Primary:** Functional equivalent to completing primary education or lower secondary or less. This level is closest to completing up to eight years of education. The exact definition will vary by country.

- **Secondary:** Functional equivalent to completing some secondary up to some tertiary education. This category typically refers to individuals who have completed nine to 15 years of education but have not completed the equivalent of a bachelor's degree. The exact definition will vary by country.

- **Tertiary:** Functional equivalent to completing four years of postsecondary tertiary education, or the equivalent of a bachelor's degree. This level typically refers to individuals who have completed approximately 16 or more years of education. The exact definition will vary by country.

Period of data collection of the 2020 Gallup World Poll

Data collection World Poll 2020

—— Cumulative interviews

WHO declares
COVID-19
a global
pandemic
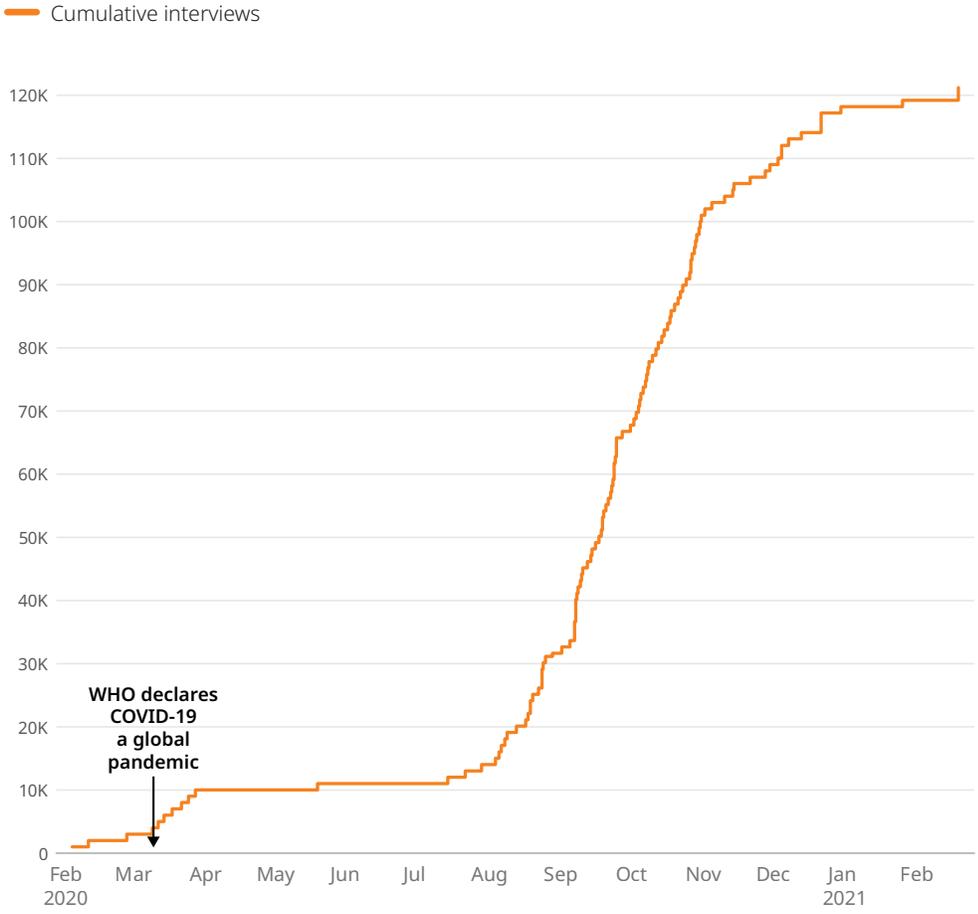
Status of the Oxford COVID-19 Government Response Tracker (OxCGRT) during fielding

The Oxford COVID-19 Government Response Tracker (OxCGRT) collects publicly available information on 23 indicators of government response:

- Containment and closure policies (indicators C1-C8) record information on containment and closure policies, such as school closures and restrictions in movement.

- Economic policies (indicators E1-E4) record economic policies, such as income support to citizens or provision of foreign aid.

- Health system policies (indicators H1-H8) record health system policies such as the COVID-19 testing regime, emergency investments into healthcare and most recently, vaccination policies.

- Vaccine policies (indicators V1-3) record vaccination policies: a country's prioritization list, eligible groups and the cost of vaccination to the individual.

For more information, please visit the official page of the tracker.

FIGURE 34

Average OxCGRT at time of fielding in each country, with 10 countries with repeated fielding
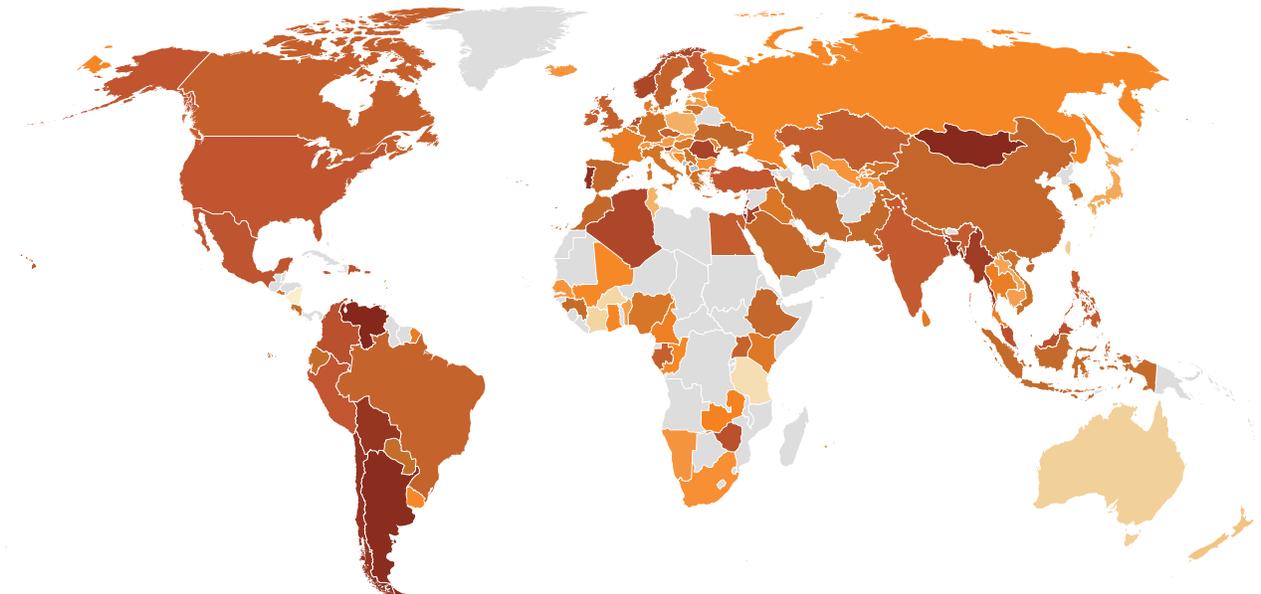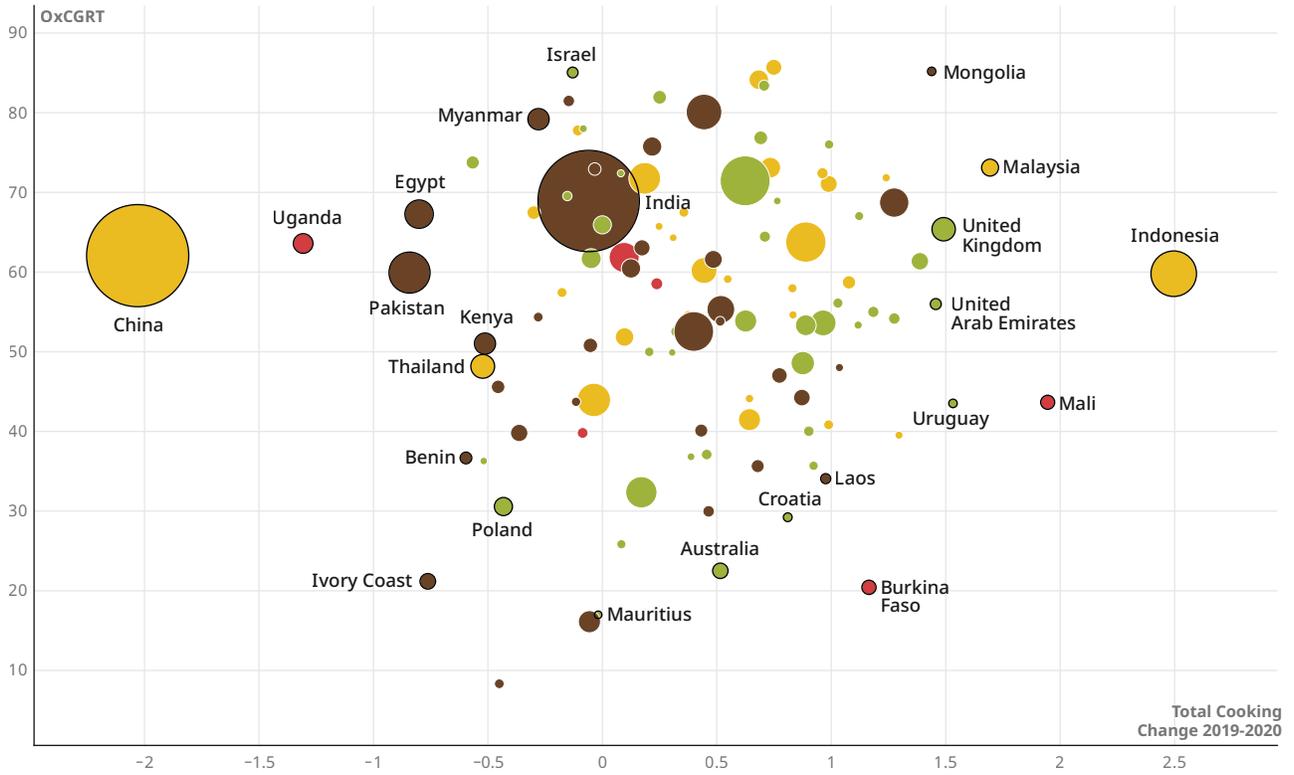
FIGURE 35

COVID-19 response stringency and cooking change compared to 2019

● High income   ● Upper middle income   ● Lower middle income   ● Low income

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