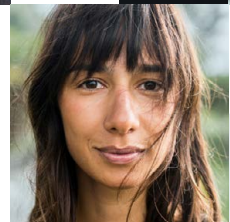
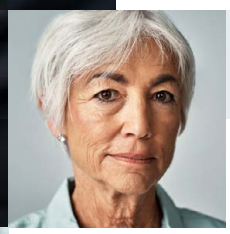


YEAR 3 GLOBAL REPORT

The Hologic Global Women's Health Index

Pathways to a Healthy Future for Women

RELEASED 2024



Global Women's Health Index

HOLOGIC®

MEASURED BY GALLUP®

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A scarcity of data persists across women’s health — first in defining women’s health, then in diagnosing illness, tracking conditions at the national level, and translating data into global insights through epidemiological studies. As a result, there are important gaps in our understanding that influence research design, investment decisions, and pipeline priorities, threatening health outcomes for women globally.

THE LANCET, JULY 2023¹

A Letter From Hologic's CEO

As a company focused on early detection, diagnosis and treatment of women's health conditions, Hologic knows firsthand that you can't improve what you don't measure.

That's why we joined forces with leading independent research firm Gallup in 2019 to create the Hologic Global Women's Health Index.

This annual survey, now in its third year, is one of the most comprehensive initiatives measuring the state of health for 97% of the world's women and girls aged 15 and older.

The Hologic Global Women's Health Index serves as an enduring benchmark to measure and monitor changes in the behaviors and attitudes that influence women's access to quality healthcare in every corner of the world.

It provides global leaders, countries and advocates with the data and insights to fuel breakthrough health policies and life-changing care programs. Often, it ignites ideas and innovations designed to improve the lives and well-being of women who are the backbone of families, communities, nations and those they love.

Our Year 3 Hologic Global Women's Health Index report reflects the real-life experiences and opinions of more than 147,000 women and men from 143 countries and territories, surveyed in more than 140 languages — captured in their own words during one-on-one interviews.

Regrettably, this year's findings reveal that women's global health has stagnated, especially in critical dimensions like Preventive Care and Basic Needs, two factors that have a major impact on a woman's average life expectancy at birth.

Last year, more than 1 billion women never visited a healthcare professional. Only 11% were screened for cancers that take millions of lives each year. And just 10% were tested for sexually transmitted diseases and infections, raising the risk of maternal and fetal mortality.

While many women felt unsafe walking alone at night, many others struggled to simply put food on the table and a roof over their family's heads. At the same time, the gaps between rich and poor nations and urban and rural communities remained as wide as ever. It is an experience that the United Nations has characterized as a "staggering backsliding" in women's health.

It's no wonder so many women in the world are worried, stressed, angry and sad.

While the most recent Hologic Global Women's Health Index survey results give us cause for concern, they also inspire us to redouble our efforts to enable healthier lives everywhere, every day, no matter where women live, how much money they have or their level of education. This is our reason for being and we never lose sight of that purpose.

Working together, I am confident that we can do better — by any measure.

I invite you to read our report and join us in our quest.



Stephen P. MacMillan

*Chairman, President and
Chief Executive Officer of Hologic*



Introduction to Year 3

In 2020, Hologic and Gallup launched the Hologic Global Women's Health Index in response to the urgent need for more timely, comprehensive and actionable data on global women's health.

The inaugural report, released in 2021, provided a troubling baseline account of the state of women's health worldwide. It showed that every country in the world — even the wealthiest — had work to do regarding women's health.

In their own words, women told interviewers they were struggling. Many couldn't meet their basic daily needs or were in poor physical or emotional health. And far too few were receiving needed tests for high blood pressure, cancer, diabetes, or sexually transmitted diseases and infections.

While these findings raised alarms, they also revealed five dimensions of health that provide a pathway for understanding, and ultimately transforming, women's health and lives.

Hologic and researchers at Gallup discovered that improvements in any one of five dimensions of health — Preventive Care, Emotional Health, Opinions of Health and Safety, Basic Needs, and Individual Health — could potentially help women live healthier and longer lives.

The latest survey, conducted in 2022,² includes participants from 143 countries and territories³ — up from 122 in the previous year. It represents the voices of 97% of the global population of women and girls aged 15 and older. Men and boys aged 15 and older were also surveyed to help identify gender gaps and make comparisons.

The findings show that women are no better off today in the five dimensions of health than they were three years ago. And in several important ways, women's health is now worse. However, as the country spotlights in this report show, there are examples of how systems can successfully care for women.

Together, these findings provide compelling new evidence that bold and urgent action is needed to improve women's health.

The findings also align with and reinforce the results of other key studies and reports. For example, a United Nations (UN) report recently warned about “staggering backsliding” in global women's health as a result of the COVID-19 pandemic, political conflict, global economic challenges and climate crises.⁴

Hologic's commitment to the Index and partnership with Gallup ensure the Index will inspire action and allow decision-makers to track key trends at the country, regional and global levels. Hologic is also committed to ensuring that the Index has a meaningful real-world impact — and engaging global partners in the pursuit of better health for all women.

Key Global Findings

Women’s health is stagnating around the world, even as the COVID-19 pandemic wanes.

Across key health measures, women are no better off today than they were in the first year of the survey, which was conducted at the height of the COVID-19 pandemic. In some cases, their health is worse. Billions of women have physical or emotional health issues, aren’t getting tested for deadly diseases, or are struggling to afford food.

Testing for deadly diseases remains low.

Most women haven’t been tested for cancer, diabetes, high blood pressure, or sexually transmitted diseases or infections (STDs/STIs) in the past 12 months, meaning that billions of women went untested for potentially life-threatening conditions.



HIGH BLOOD PRESSURE TESTING

36% of women were tested for **high blood pressure** — a major risk factor for heart disease and stroke.



CANCER TESTING

Just **11% of women** say they were tested for any type of **cancer**.



DIABETES TESTING

Although **diabetes** is a leading cause of death for women, only **19% of women** were tested.



STD/STI TESTING

Just **10% of women** were tested for an **STD/STI** — leaving nearly 2 billion women of reproductive age at risk of infertility, increased maternal and fetal mortality, and deadly diseases.

Emotional health is getting worse, with notable gaps between men and women.

More women say they are sad, angry and worried now than three years ago, at the height of the COVID-19 pandemic.

When asked about the emotions they experienced a lot of the previous day, women said:



1 in 4
EXPERIENCED ANGER



3 in 10
EXPERIENCED SADNESS



ABOUT
4 in 10
EXPERIENCED STRESS



ABOUT
4 in 10
EXPERIENCED WORRY

These negative emotions were rising before the pandemic, but COVID-19 exacerbated them.

Women are more likely than men to feel these negative emotions; for example, women are 20% more likely than men to say they experienced sadness a lot of the previous day.

Other striking global findings:



More women say they are in pain now than three years ago. Nearly a billion women — about one in three worldwide — say they spent a lot of the previous day in physical pain.



Fewer women are able to afford housing. Although numbers have remained stable over the past three years, the percentage of women struggling to afford shelter has increased by nearly half in the past decade.



Many young women don't feel safe. More than four in 10 women aged 15 to 24 say they do not feel safe walking alone at night in the area where they live.

About the Hologic Global Women's Health Index

The Index is a multiyear survey of women and men worldwide that annually tracks multiple comprehensive factors related to health. It is designed to fill a critical gap in what the world understands about the health, safety and well-being of women — informed by women's own experiences and opinions — while shedding light on relevant gender differences.

Please see the [Appendix 1](#) for more details on how the Index was developed and scored.

Why is the Index important?

The Index is one of the world's largest and most comprehensive measures of women's health, providing actionable insights that can be used to rapidly improve health policies and practices worldwide.

The Index survey stands out for its annual cadence, its collection of the voices of women (as well as men for gender-gap analysis), its broad and intersectional definition of women's health, and its extensive global coverage, including countries and territories where national statistics and gender-disaggregated data are limited or unavailable. In addition, because of Hologic's commitment to collecting and sharing these data annually, the Index makes it possible for decision-makers to track key trends in women's health over time.

What do the scores mean?

The Index score is a single-number summary indicator of women's answers to survey questions that, taken together, account for approximately 70% of the variance in a woman's average life expectancy at birth.

Scores on the Index and each of the five dimensions range from 0 (worst) to 100 (best). Although the survey includes men, Index and individual dimension scores are based only on responses from women and girls.

While some of the questions used to calculate these scores ask about negative experiences, such as daily stress, the scores are based on the positive response. For example, if a woman says "no" when asked whether she experienced stress during much of the previous day, that is scored positively.

What does the Index measure?

The Gallup research team, Hologic and external experts designed the survey questions to capture a comprehensive view of women's health across five dimensions:



Dimension of Women's Health	Survey Item
Preventive Care	<p>To the best of your knowledge, were you tested for any of the following in the past 12 months?</p> <ul style="list-style-type: none"> • High blood pressure • Cancer • Diabetes • Sexually transmitted diseases or infections
Emotional Health	<p>Did you experience the following feelings during a lot of the day yesterday?</p> <ul style="list-style-type: none"> • How about worry? • How about sadness? • How about stress? • How about anger?
Opinions of Health and Safety	<ul style="list-style-type: none"> • In the city or area where you live, are you satisfied or dissatisfied with the availability of quality healthcare? • Do you think most pregnant women in the city or area where you live receive high-quality healthcare during their pregnancies, or not? • Do you feel safe walking alone at night in the city or area where you live?
Basic Needs	<ul style="list-style-type: none"> • 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? • Have there been times in the past 12 months when you did not have enough money to provide adequate shelter or housing for you and your family?
Individual Health	<ul style="list-style-type: none"> • Do you have any health problems that prevent you from doing any of the things people your age normally can do? • Did you experience the following feelings during a lot of the day yesterday? How about physical pain?

Gallup calculates dimension scores by averaging the responses to the questions in each dimension and creating a weighted average.

Then, each dimension is weighted depending on how much it accounts for the variance in the Index score. For example, the Preventive Care dimension explains more of the variance in the Index score than the other dimensions, so it is given more weight. The Index score is the weighted sum of each dimension score.

For more information on the methodology, see the [Appendix 2](#).

When were the data collected?

Year 1, Year 2 and Year 3 refer to the surveys that Hologic and Gallup have conducted annually since 2020. In tables and charts throughout the report, these are abbreviated as Y1, Y2 and Y3.

Report Year	Data Collection and Analysis
Inaugural report (Year 1)	Year 1 data were gathered in 2020 and analyzed in 2021.
Year 2	Year 2 data were gathered in 2021 and analyzed in 2022.
Year 3	Year 3 data were gathered in 2022 and analyzed in 2023.



Global Results and Rankings

Women’s global health is no better now than it was at the height of the COVID-19 pandemic.

Overall, the world scored **54 out of 100 on the Index in Year 3**. That’s just one point higher than in Year 2, and the same as in Year 1. That means the health of women and girls has not meaningfully⁵ improved since the height of the COVID-19 pandemic.

At the country level, the picture is more mixed. From Year 1 to Year 3, Index scores increased in 16 countries and decreased in eight. But all countries — even the best-scoring ones — have work to do: Not one country or territory scored higher than 72 out of 100.

Index scores for Year 3 range from a high of **72** in Taiwan, which led the world for the third consecutive year, to a low of **26** in Afghanistan.

Rank	Country/Territory	Hologic Global Women’s Health Index Score
1	Taiwan, Province of China	72
2	Kuwait	68
3	Austria	67
4	Germany	67
5	Switzerland	66
6	Israel	66
7	Japan	65
8	Denmark	64
9	Poland	64
10	Czech Republic	64
11	Finland	64
12	Netherlands	64
13	South Korea	64
14	Belgium	64
15	Vietnam	64
16	Norway	64
17	Singapore	64
18	United Arab Emirates	63
19	China	63
20	Latvia	63

Rank	Country/Territory	Hologic Global Women's Health Index Score
21	Sweden	63
22	Luxembourg	62
23	Estonia	62
24	Ireland	62
25	Australia	62
26	Iceland	62
27	Hong Kong, S.A.R. of China	62
28	Greece	62
29	Mauritius	61
30	United States of America	61
31	Kazakhstan	61
32	Thailand	60
33	Lithuania	60
34	Slovakia	60
35	Kosovo	60
36	Slovenia	60
37	United Kingdom of Great Britain and Northern Ireland	60
38	Puerto Rico	60
39	New Zealand	60
40	France	60
41	Malaysia	60
42	Bulgaria	60
43	Indonesia	59
44	Saudi Arabia	59
45	South Africa	59
46	Croatia	59
47	Hungary	59
48	Portugal	58
49	Cyprus	58
50	Spain	58

Rank	Country/Territory	Hologic Global Women's Health Index Score
51	Uruguay	57
52	Uzbekistan	57
53	Malta	57
54	Montenegro	57
55	Tajikistan	57
56	Jamaica	56
57	Italy	56
58	North Macedonia	56
59	Russian Federation	55
60	Costa Rica	55
61	Canada	55
62	Serbia	55
63	Chile	54
64	Paraguay	54
65	Romania	54
66	Kyrgyzstan	54
67	Mongolia	54
68	Bosnia and Herzegovina	54
69	Mexico	53
70	Algeria	53
71	Tanzania	53
72	Argentina	52
73	El Salvador	52
74	Republic of Moldova	52
75	Zambia	52
76	Albania	51
77	Georgia	51
78	Egypt	51
79	Palestinian Territories	50
80	Zimbabwe	49

Rank	Country/Territory	Hologic Global Women's Health Index Score
81	Lao People's Democratic Republic	49
82	Tunisia	49
83	Botswana	49
84	Eswatini	49
85	Namibia	49
86	Guatemala	49
87	Cambodia	49
88	Panama	49
89	Lesotho	49
90	Mozambique	49
91	Nicaragua	48
92	Ghana	48
93	Philippines	48
94	Nigeria	47
95	Iran	47
96	Kenya	47
97	India	47
98	Pakistan	47
99	The Dominican Republic	47
100	Colombia	46
101	Nepal	46
102	Libya	46
103	Türkiye	46
104	Brazil	46
105	Honduras	46
106	Mali	46
107	Yemen	45
108	Ethiopia	45
109	Jordan	45
110	Lebanon	45

Rank	Country/Territory	Hologic Global Women's Health Index Score
111	Bangladesh	45
112	Sri Lanka	45
113	Malawi	44
114	Senegal	44
115	Armenia	44
116	Azerbaijan	43
117	Myanmar	43
118	Uganda	43
119	Madagascar	42
120	Venezuela	42
121	Bolivia	42
122	Northern Cyprus	42
123	Cameroon	42
124	Peru	41
125	Niger	41
126	Ecuador	41
127	Togo	41
128	Mauritania	41
129	Gambia	40
130	Iraq	40
131	Côte d'Ivoire	40
132	The Comoros	40
133	Guinea	40
134	Morocco	39
135	Gabon	39
136	Liberia	38
137	Chad	37
138	Benin	37
139	The Democratic Republic of the Congo	36
140	The Republic of the Congo	35
141	Sierra Leone	34
142*	Afghanistan	26

*The Year 3 survey includes 143 countries. Several questions could not be asked in Ukraine due to the ongoing conflict. Because of these missing questions, Gallup could not calculate Ukraine's overall Index score and certain dimension scores. Some rankings in this report only include 142 countries.





INSIGHT

G20 member countries, as a whole, perform better than the global average when it comes to opinions of women’s health and safety and meeting women’s basic needs of food and shelter.

Generally, European and Asian countries within the G20 perform best across the Index and on the individual dimensions. Countries in Latin America, India and Türkiye perform, on average, more poorly than their G20 counterparts.

G20 Country Index Results, Ranked by Overall Score

G20 Member Countries	Overall Index Score	Preventive Care	Emotional Health	Opinions of Health and Safety	Basic Needs	Individual Health
Germany	67	36	73	84	90	74
Japan	65	22	78	85	93	78
South Korea	64	37	74	78	75	74
China*	63	19	72	88	86	85
Australia	62	29	71	72	90	71
United States of America	61	36	65	69	82	72
United Kingdom of Great Britain and Northern Ireland	60	23	69	73	91	74
France	60	22	69	79	84	73
Indonesia	59	19	75	84	63	83
Saudi Arabia	59	15	71	86	82	73
South Africa	59	42	74	57	57	75
G20 AVERAGE	56	20	67	74	74	73
Italy	56	17	64	68	92	71
Russian Federation	55	24	77	53	69	69
Canada	55	23	60	68	83	67
GLOBAL AVERAGE	54	19	66	70	67	71
Mexico	53	23	72	48	65	80
Argentina	52	31	64	51	64	68
India	47	12	57	71	57	59
Türkiye	46	13	55	51	62	79
Brazil	46	18	57	45	69	65

*China data collected in 2021.



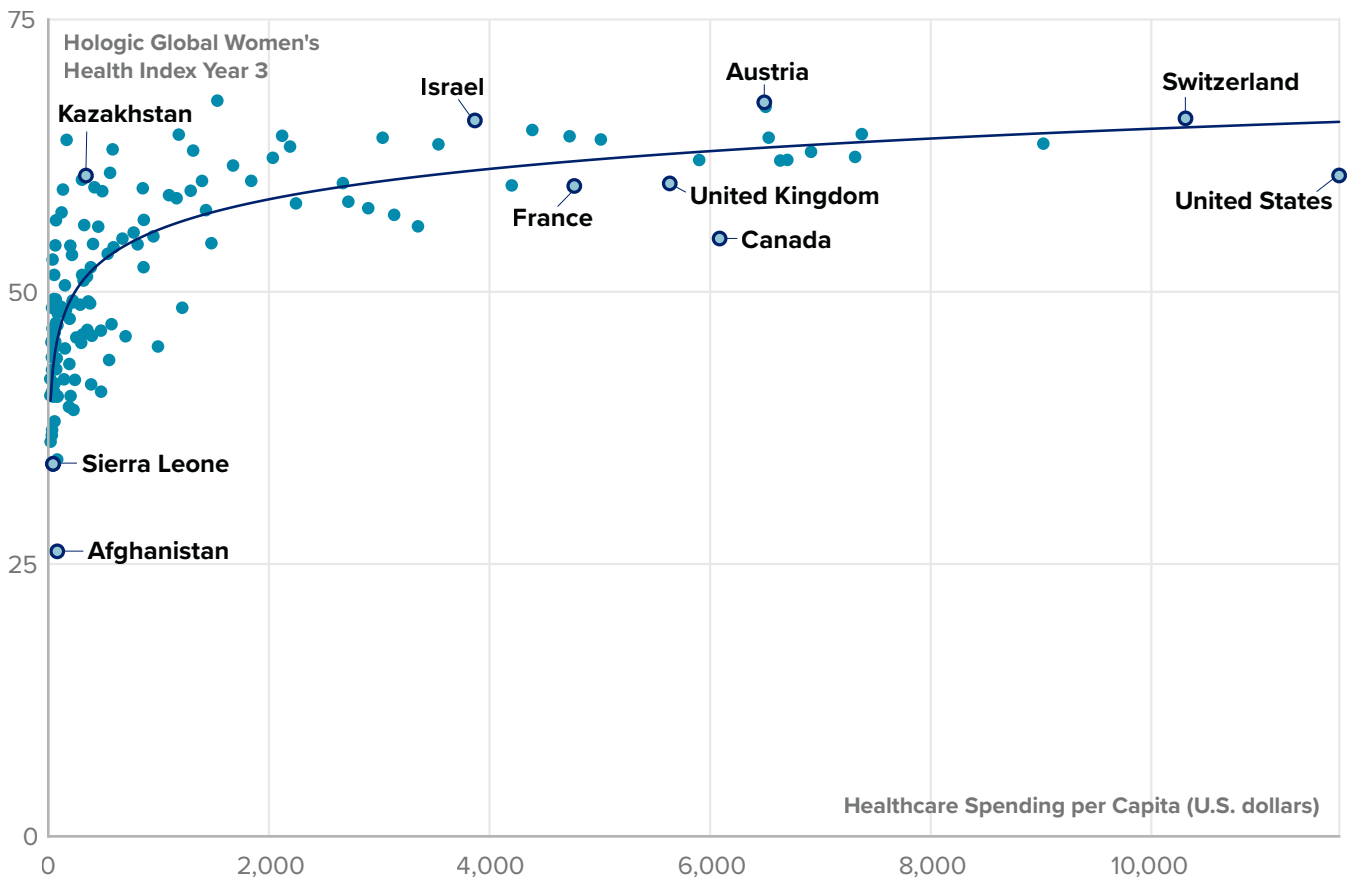
INSIGHT

High incomes and healthcare spending per capita do not guarantee high Index scores.

Many other factors influence women's health, including laws, cultural norms and climate change.

The U.S. is a case in point. While it is a high-income country with high spending on healthcare per capita, it has fallen seven places to No. 30 in the overall country rankings, on par with Kazakhstan. Other countries with relatively low rankings include the United Kingdom (No. 37), France (No. 40) and Canada (No. 61).

Healthcare Spending per Capita by Hologic Global Women's Health Index Score













Possible Index scores range from 0 to 100.

The countries with the lowest Index scores are a mix of mostly low- and lower-middle-income economies. These countries tend to spend the least on healthcare and have weak or destabilized healthcare infrastructure.











Notably, all countries that rank in the bottom 10 have scores below the global average on the Preventive Care dimension of health — a critical dimension where, as this report shows, the world has the most work to do.

▲ Highest-Ranking Countries/Territories

		Overall Index Score	Change Y3-Y1	Preventive Care Score	Emotional Health Score	Opinions of Health and Safety Score	Basic Needs Score	Individual Health Score
GLOBAL AVERAGE		54	0	19	66	70	67	71
1	 Taiwan, Province of China	72	3	32	86	89	94	85
2	 Kuwait*	68	N/A	16	84	97	89	86
3	 Austria	67	0	35	74	88	91	74
4	 Germany	67	2	36	73	84	90	74
5	 Switzerland	66	2	24	80	89	91	72
6	 Israel	66	4	21	80	77	96	87
7	 Japan	65	4	22	78	85	93	78
8	 Denmark	64	0	27	73	88	92	70
9	 Poland	64	9 ↑	19	84	67	94	87
10	 Czech Republic	64	2	33	71	80	91	70

*First appearance in the Index. N/A = Not asked in the comparison year. At the country level, changes must be at least five points higher or lower to be considered meaningful.

▼ Lowest-Ranking Countries/Territories



		Overall Index Score	Change Y3-Y1	Preventive Care Score	Emotional Health Score	Opinions of Health and Safety Score	Basic Needs Score	Individual Health Score
GLOBAL AVERAGE		54	0	19	66	70	67	71
133	 Guinea	40	-2	16	52	59	34	49
134	 Morocco	39	-9 ↓	13	51	42	56	52
135	 Gabon	39	1	16	58	33	40	60
136	 Liberia*	38	N/A	18	52	42	34	53
137	 Chad*	37	N/A	17	48	52	39	39
138	 Benin	37	-9 ↓	8	56	57	27	48
139	 The Democratic Republic of the Congo*	36	N/A	14	52	41	30	55
140	 The Republic of the Congo	35	-3	11	50	46	33	50
141	 Sierra Leone	34	N/A	18	46	39	32	41
142	 Afghanistan	26	N/A	10	38	22	19	55

*First appearance in the Index. N/A = Not asked in the comparison year. At the country level, changes must be at least five points higher or lower to be considered meaningful.




The Five Building Blocks for Improving Women’s Health

Together, the five dimensions of the Hologic Global Women’s Health Index — Preventive Care, Emotional Health, Opinions of Health and Safety, Basic Needs, and Individual Health — paint a comprehensive picture of women’s health.

The State of Global Women’s Health

	Year 3	Year-Over-Year Change Since Year 2	Change Since Year 1
 PREVENTIVE CARE Scores in Preventive Care have been flat. Only testing for high blood pressure increased in Year 3.			
Dimension Score	19	0	0
% Women tested for high blood pressure	36	2	3
% Women tested for cancer	11	-1	-1
% Women tested for diabetes	19	0	0
% Women tested for STDs/STIs	10	-1	-1
 EMOTIONAL HEALTH Women experience negative emotions — except stress — at higher rates now than in Year 1.			
Dimension Score	66	2 ↑	-2 ↓
% Women experienced anger previous day	25	-1	2
% Women experienced stress previous day	39	-2	1
% Women experienced sadness previous day	30	-2	4
% Women experienced worry previous day	42	-1	2

Changes between years for dimension scores are measured in points. Changes between years for individual survey items are measured in percentage points. At the global level, changes must be at least two points higher or lower to be considered significant.

 OPINIONS OF HEALTH AND SAFETY Women's assessments of pregnancy care and healthcare in their areas now are better than they were in Year 2, and more women feel safe. Even with these gains, opinions of health and safety today are no better than what they were in Year 1.		Year 3	Year-Over-Year Change Since Year 2	Change Since Year 1
Dimension Score		70	4 ↑	0
% Women think their area has high-quality pregnancy care		69	4	0
% Women satisfied with the availability of quality healthcare in their area		68	3	0
% Women feel safe walking alone at night where they live		65	4	0
 BASIC NEEDS Women are as likely to struggle to afford food now as they were in Year 2, but more are struggling today than in Year 1.		Year 3	Year-Over-Year Change Since Year 2	Change Since Year 1
Dimension Score		67	1	-1
% Women could <i>not</i> afford food		36	-1	2
% Women could <i>not</i> afford shelter		30	0	1
 INDIVIDUAL HEALTH Women are as likely to experience pain and have health problems now as they were in Year 2, but they are more likely to be in pain and have health problems today than they were in Year 1.		Year 3	Year-Over-Year Change Since Year 2	Change Since Year 1
Dimension Score		71	0	-4 ↓
% Women with health problems		24	-1	4
% Women experienced physical pain previous day		34	0	4

Changes between years for dimension scores are measured in points. Changes between years for individual survey items are measured in percentage points. At the global level, changes must be at least two points higher or lower to be considered significant.





Preventive Care

Testing for Deadly Diseases Remains Low

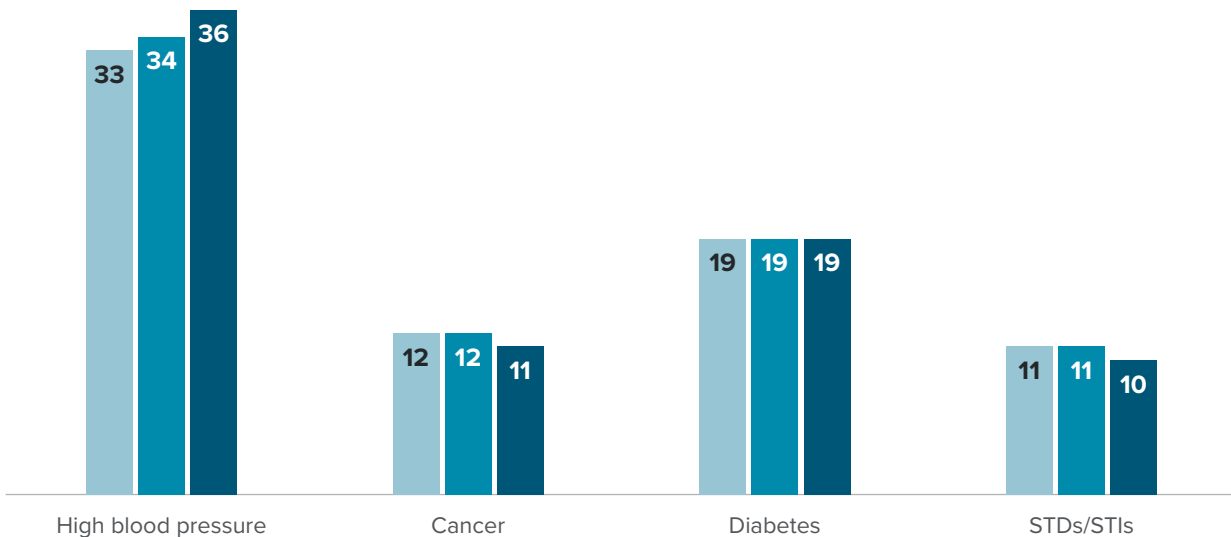
Preventive care aims to help people avoid illnesses and detect health problems early, ideally before the onset of symptoms. The right test at the right time helps make it possible for women to be treated and live healthier and potentially longer lives.

Most women say they haven't been tested⁶ for cancer, diabetes, high blood pressure or an STD/STI in the past 12 months, meaning that billions of women went untested for potentially life-threatening conditions for the third consecutive year.

Testing or screening recommendations for these four diseases and conditions vary based on a person's age, gender and the healthcare resources available to them in their community. The 12-month period in the survey question is not a globally agreed-upon cadence, but because the Index has been conducted for three years in a row, it captures testing that may be recommended in a three-year period at a variety of ages.

Percentage of Women Tested in Past 12 Months

■ Year 1 ■ Year 2 ■ Year 3



Measuring Preventive Care

The Hologic Global Women's Health Index's Preventive Care dimension measures whether women in the past year have been tested for any of these serious health conditions by asking:

To the best of your knowledge, were you tested for any of the following in the past 12 months?

- High blood pressure
- Cancer
- Diabetes
- Sexually transmitted diseases or infections

Scores on this dimension are calculated at the individual level. To get a score, individuals need to answer at least three of the four questions. The resulting score is a simple mean of the positive answers. Higher scores on the Preventive Care dimension mean more women are getting tested for these health factors.

Preventive Care Dimension: Scores and Rankings

Higher scores on the Preventive Care dimension of the Index mean more women are getting tested for these conditions.



The global score for Preventive Care in Year 3 is 19 out of 100 — lower than any other dimension of health. This score has not changed since the first year of the Index — a time when many women could not access health testing because of COVID-19 restrictions.

The story is not the same everywhere in the world, however. The U.S. and Canada score highest on the Preventive Care dimension with a score of 35, up four points from Year 1. Scores in sub-Saharan Africa and Northern Africa, which are easily half as high as those in the U.S. and Canada, are significantly lower in Year 3 than in Year 1.

Preventive Care Dimension Scores by Region

	Preventive Care	Change Y3-Y1	Change Y3-Y2
U.S. and Canada	35	4 ↑	-3 ↓
Caribbean	33	2 ↑	8 ↑
Australia and New Zealand	29	-2 ↓	0
Europe	24	0	0
Central America	23	-1	-10 ↓
South America	21	3 ↑	-1
Eastern Asia	20	2 ↑	0
Central Asia	20	3 ↑	2 ↑
Sub-Saharan Africa	18	-4 ↓	0
South-eastern Asia	17	-2 ↓	3 ↑
Northern Africa	15	-7 ↓	-1
Western Asia	15	0	0
Southern Asia	13	1	2 ↑






At the regional level, changes must be at least two points higher or lower to be considered significant.



A woman in South Africa talks about her views during a survey with a Gallup World Poll interviewer.

Country Data Within the Preventive Care Dimension

▲ Highest-Ranking Countries/Territories






Preventive Care Rank	Overall Index Rank	Country/Territory	Preventive Care Score	Overall Index Score	Preventive Care Score Change Y3-Y1	Preventive Care Score Change Y3-Y2
GLOBAL AVERAGE			19	54	0	0
1	38	 Puerto Rico*	51	60	N/A	N/A
2	45	 South Africa	42	59	-1	11 ↑
3	84	 Eswatini*	40	49	N/A	N/A
4	89	 Lesotho*	38	49	N/A	N/A
5	48	 Portugal	38	58	-4	1
Average of Highest Ranked			42	55	-3	-5

N/A = Not asked in the comparison year.

*First appearance in the Index.

At the global level, changes must be at least two points higher or lower to be considered significant.
At the country level, changes must be at least five points higher or lower to be considered meaningful.

▼ Lowest-Ranking Countries/Territories

Preventive Care Rank	Overall Index Rank	Country/Territory	Preventive Care Score	Overall Index Score	Preventive Care Score Change Y3-Y1	Preventive Care Score Change Y3-Y2
GLOBAL AVERAGE			19	54	0	0
139	142	 Afghanistan	10	26	N/A	-3
140	15	 Vietnam	9	64	-23 ↓	-8 ↓
141	127	 Togo	9	41	N/A	2
142	138	 Benin	8	37	-4	0
143	131	 Côte d'Ivoire	8	40	0	3
Average of Lowest Ranked			9	42	-9	-1

N/A = Not asked in the comparison year.

*First appearance in the Index.






At the global level, changes must be at least two points higher or lower to be considered significant.
At the country level, changes must be at least five points higher or lower to be considered meaningful.



Countries/Territories With Largest Increases and Declines From Year 2 to Year 3






Two of the countries and territories that saw double-digit gains on the Preventive Care dimension between Years 2 and 3 — Thailand and South Africa — rank among the top 10 countries in the world on this dimension. Reported testing increased substantially for all four conditions. For the first time since Year 1, majorities of women in South Africa (61%) and Thailand (56%) report being tested for high blood pressure.

+ Largest Increases

Preventive Care Rank	Overall Index Rank	Country/Territory	Preventive Care Score	Preventive Care Score Change Y3-Y2
8	32	 Thailand	37	13 ↑
21	1	 Taiwan, Province of China	32	11 ↑
2	45	 South Africa	42	11 ↑
85	17	 Singapore	18	8 ↑
14	56	 Jamaica	34	8 ↑

Among the countries and territories that saw meaningful losses on the Preventive Care dimension between Years 2 and 3, Lithuania and Vietnam saw their scores drop well below the global average. Neither country scored highly in Year 2, but the losses in Vietnam in Year 3 dropped the country almost to the bottom of rankings globally. In Vietnam, far fewer women were tested for cancer, diabetes and STDs/STIs compared with the previous year.

- Largest Declines

Preventive Care Rank	Overall Index Rank	Country/Territory	Preventive Care Score	Preventive Care Score Change Y3-Y2
140	15	 Vietnam	9	-8 ↓
124	33	 Lithuania	13	-9 ↓
7	20	 Latvia	37	-9 ↓
79	9	 Poland	19	-12 ↓
47	69	 Mexico	23	-12 ↓

Demographic Data Within the Preventive Care Dimension

	Preventive Care Score	Y3-Y1 Change	Y3-Y2 Change	% Yes			
				Tested for high blood pressure	Tested for cancer	Tested for diabetes	Tested for STDs/STIs
Age							
15-24	10	0	0	20	4	8	10
25-30	15	-1	0	29	7	13	11
31-40	17	0	1	32	9	16	11
41-50	21	-3 ↓	0	38	13	21	10
51-60	28	3 ↑	1	51	19	33	9
61-70	30	-1	0	55	18	36	9
71+	33	3 ↑	0	64	23	40	6
Area							
Urban	20	1	-1	36	13	22	11
Rural	18	0	1	36	10	18	9
Per Capita Income Quintiles							
Poorest 20%	17	-1	0	34	9	18	9
Second 20%	18	0	0	35	11	18	9
Middle 20%	20	2 ↑	0	37	12	20	11
Fourth 20%	20	0	0	36	12	20	9
Richest 20%	21	1	0	38	11	21	12

At the global level, changes must be at least two points higher or lower to be considered significant. Quintiles based on respondent-reported income.



A woman in Cambodia talks about her views during a survey with a Gallup World Poll interviewer.



HIGH BLOOD PRESSURE

Testing Increased Slightly in 2022

Blood pressure tests detect high blood pressure — or hypertension — which is a major risk factor for heart disease and stroke.⁷ Hypertension has been called “the most serious, neglected health problem for women in both developing and developed worlds,” because while it is relatively easy to treat, it often goes undiagnosed.⁸

A recent global analysis showed that in the past 30 years, the number of women with **hypertension has almost doubled**, with much of the disease burden shifting from high-income countries to low- and middle-income countries.⁹

In the Year 3 survey, 36% of women were tested for high blood pressure in the previous 12 months — which is a small but statistically significant increase from 33% in Year 1. However, this still means that nearly 2 billion women did not get tested, including more than half a billion women over the age of 40, who are recommended to get tested yearly.¹⁰

Reported testing for high blood pressure varies across the globe, from a **low of 13% in Togo** to a **high of 70% in Puerto Rico**. Although Togo ranks the lowest in the world for the second consecutive year, the 13% of women who report being tested for high blood pressure in Year 3 is up slightly from 8% in Year 2, which may reflect the country’s recent efforts to improve healthcare.¹¹

Countries/Territories With the Highest and Lowest Rates of High Blood Pressure Testing

Percentage of women tested for high blood pressure in past 12 months

▲ Highest-Ranking Countries/Territories

	Puerto Rico	70
	Latvia	68
	Costa Rica	67
	United States of America	65
	Uruguay	65

▼ Lowest-Ranking Countries/Territories

	Afghanistan	18
	The Comoros	18
	Niger	18
	Benin	16
	Côte d'Ivoire	15
	Togo	13

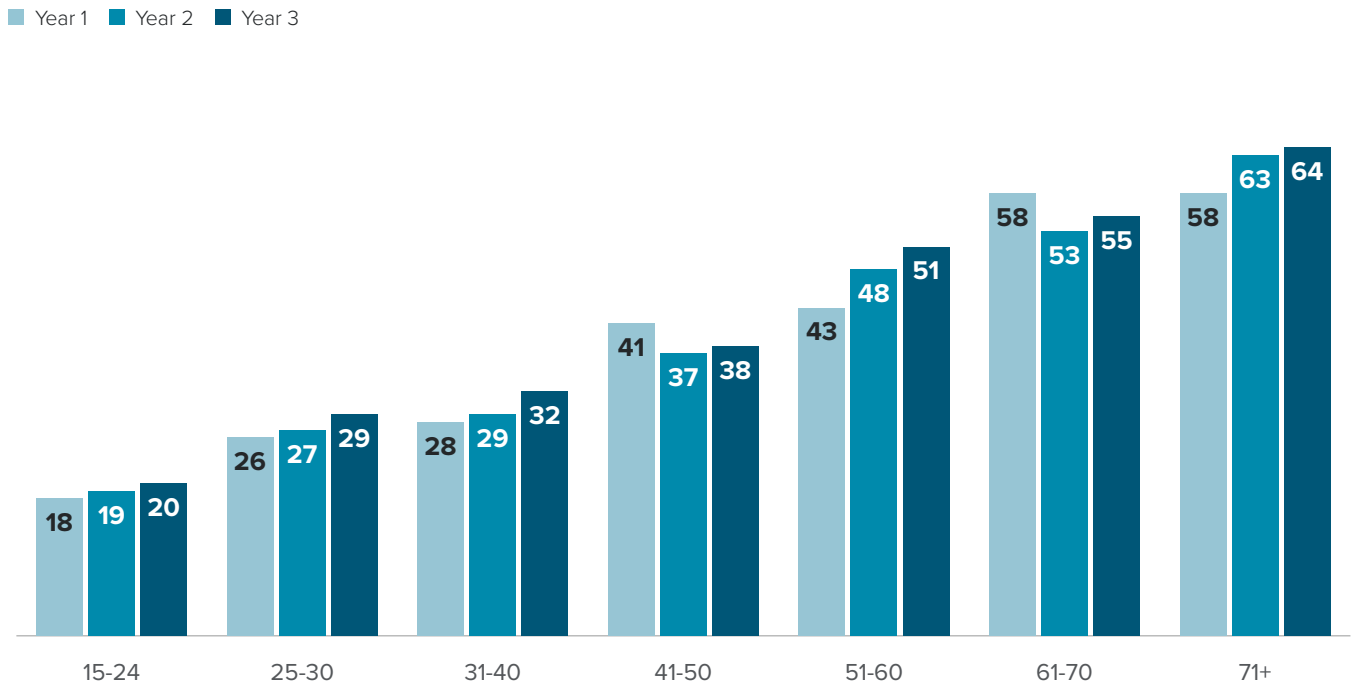


INSIGHT INTO PREVENTIVE CARE

Reports of testing increased statistically among women in almost all age groups between Year 1 and Year 3, except in the 41 to 50 and 61 to 70 age groups.

The largest increase was eight points among women aged 51 to 60, the age group most closely associated with the typical onset of menopause.

Percentage of Women Worldwide Tested for High Blood Pressure in Past 12 Months by Age

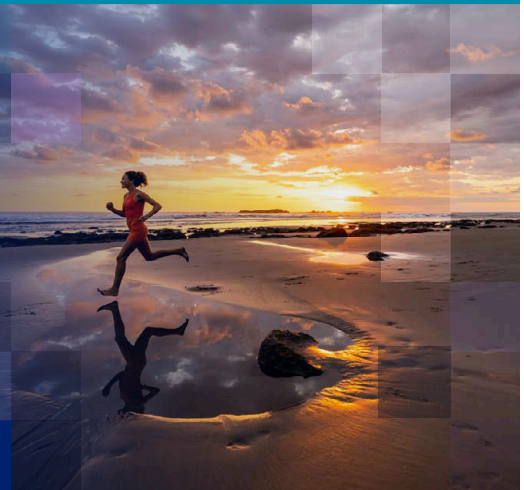


COUNTRY SPOTLIGHT ON PREVENTIVE CARE



Costa Rica

High Rates of Blood Pressure Testing With Low Healthcare Costs



Costa Rica has one of the highest blood pressure testing rates in the world, with **67% of women in Year 3 reporting that they had been tested.**

This is **18 points higher than the median** for countries in Latin America and the Caribbean (49%).

Costa Rica's reported testing rates are on par with those in the U.S. (65%), even though Costa Rica spends one-sixth the GDP per capita on healthcare that the U.S. does and far less than the global average.¹² However, the country has prioritized public health for decades and invested heavily in targeting "the most readily preventable kinds of death and disability."¹³ Today, universal primary care is delivered by thousands of local teams across the country, with an emphasis on prevention and public health.¹⁴

Costa Rica also has higher hypertension treatment rates than most high-income countries, including the U.S.,¹⁵ which helps explain why mortality from heart disease in the country is 12% lower for women than it is in the U.S.¹⁶ Another factor could be that in Costa Rica, about half of doctors are women, compared with about a third in the U.S.¹⁷ Studies have found that a woman is more likely to survive a heart attack when her doctor is a woman.¹⁸



CANCER TESTING

Rates Are No Better Than at the Height of the Pandemic

The International Agency for Research on Cancer estimates that globally, one in five people develop cancer in their lifetime, with one in 11 women dying from the disease.¹⁹ The burden of cancer is rising globally, in part related to aging, population growth and expanding risk factors related to socioeconomic development. Cancer incidence and deaths have also increased dramatically in low- and middle-income countries, which now bear 70% of the global cancer burden.²⁰

In all countries, regardless of income level, early detection and diagnosis improve health outcomes for many cancers. According to the World Health Organization (WHO), between 30% and 50% of cancers are preventable, with early detection playing an important role.²¹ If women have access to treatment at the earliest possible time, it gives them the best chance for less aggressive, less costly and more effective treatment.²²






In Year 3, just 11% of women were tested for any type of cancer in the past 12 months — which is statistically unchanged from the 12% reported in Years 1 and 2. This means 89% — more than 2 billion women worldwide — went untested.

Cancer testing rates vary widely across the globe, from a **low of 0% in Kuwait** to a **high of 46% in Puerto Rico**. Notably, testing rates for women in Pakistan, where only 1% of women report being tested, have remained unchanged since Year 1 — underscoring the sociocultural and structural barriers that keep women from getting testing and treatment.²³






Countries/Territories With the Highest and Lowest Rates of Cancer Testing

Percentage of women tested for cancer in past 12 months

▲ Highest-Ranking Countries/Territories

	Puerto Rico	46
	South Korea	42
	Germany	37
	Eswatini	36
	Austria	34

▼ Lowest-Ranking Countries/Territories

	Philippines	1
	Bangladesh	1
	Afghanistan	1
	Pakistan	1
	Kuwait	0

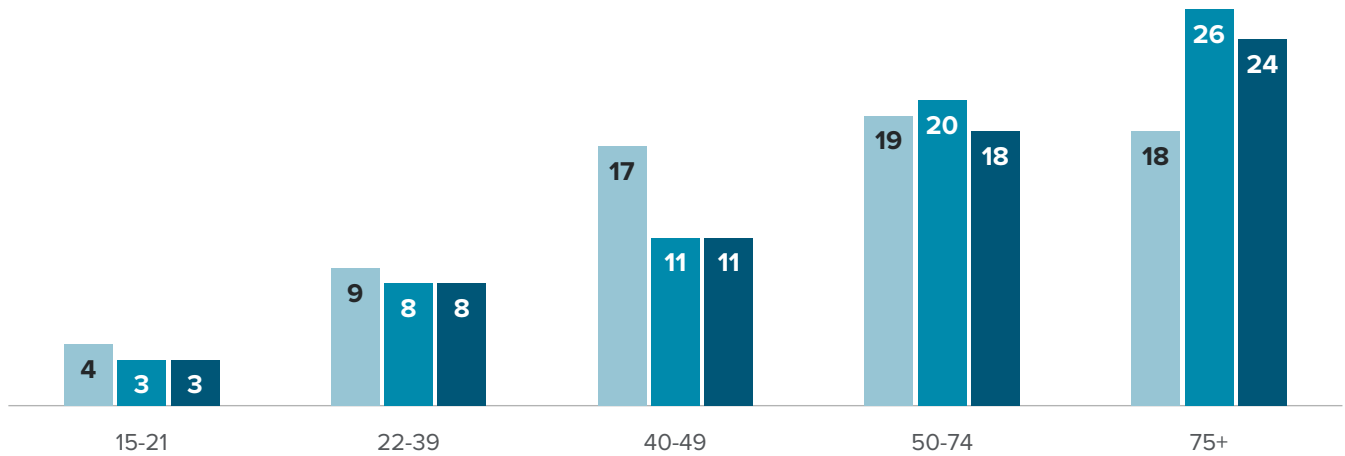


INSIGHT INTO PREVENTIVE CARE

Concerningly, the cancer testing rate for women in the key 40 to 49 age group — the age at which women at average risk should be tested for breast and colorectal cancers²⁴ — is **just 11% in Year 3, down from 17% in Year 1 and unchanged from Year 2.**²⁵

Percentage of Women Worldwide Tested for Cancer in Past 12 Months by Age

■ Year 1 ■ Year 2 ■ Year 3

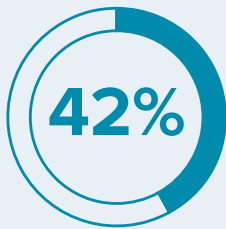


COUNTRY SPOTLIGHT ON PREVENTIVE CARE



South Korea

Consistent Top Performer
in Cancer Testing

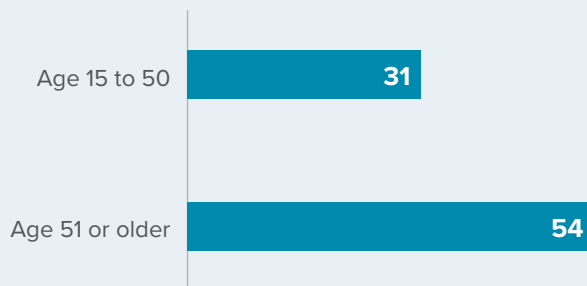


South Korea has been a leader in cancer testing among women for three years in a row: Forty-two percent of South Korean women report in Year 3 that they were tested for any type of cancer in the past 12 months.

In 1999, the South Korean government established the National Cancer Screening Program (NCSP) to provide clear guidance on testing protocols and free or low-cost cancer testing for qualifying women. In 2002, the NCSP instituted a recommendation for biannual mammogram screenings beginning at age 40. This helped to double participation in breast cancer screening between 2004 and 2018.²⁶

Today, more than 50% of South Korean women aged 51 and older report they have been tested for cancer. Given the biannual recommendation for breast cancer screening, over 50% annual screenings is an important marker of success for South Korea, where breast cancer is the most common cancer for women and a leading cause of cancer death.²⁷

Percentage of South Korean Women Tested for Any Cancer in Past 12 Months





A woman in The Republic of the Congo talks about her views during a survey with a Gallup World Poll interviewer.



DIABETES TESTING

Diabetes Among Fastest-Growing Killers, But Testing Remains Flat

Diabetes is a leading cause of death for women — and one of the fastest-growing chronic diseases in the world. When a person has diabetes, their body doesn't make enough insulin to regulate blood sugar, or it can't use the insulin as well as it should. Over time, this can cause health problems such as heart disease, small vessel disease, vision loss and kidney disease. It is estimated that 537 million adults worldwide were living with diabetes in 2021, and this number could rise to 643 million by 2030.²⁸

There are three main types of diabetes:²⁹

Type	Age Cohort	Percentage of Diagnoses	Preventable
Type 1	Children, teens, young adults	5% to 10%	No, mutation based
Type 2	Adults	90% to 95%	In most cases, with lifestyle changes in diet and exercise
Gestational	Pregnant women	2% to 10% of pregnancies (U.S.)	No, diet and exercise will change this





In Year 3, fewer than one in five women worldwide (19%) were tested for diabetes in the past 12 months — unchanged from levels in Years 1 and 2. This means 81% — more than 2 billion women — went untested in each of the past three years.

Testing for diabetes among women varies across the globe, from a **low of 4% in Côte d'Ivoire and Benin** to a **high of 57% in Puerto Rico**.







Countries/Territories With the Highest and Lowest Rates of Diabetes Testing

Percentage of women tested for diabetes in past 12 months

▲ Highest-Ranking Countries/Territories

 Puerto Rico	57
 Greece	47
 Thailand	45
 South Africa	44
 South Korea	43

▼ Lowest-Ranking Countries/Territories

 Tajikistan	7
 The Republic of the Congo	7
 Mali	6
 Malawi	5
 Benin	4
 Côte d'Ivoire	4

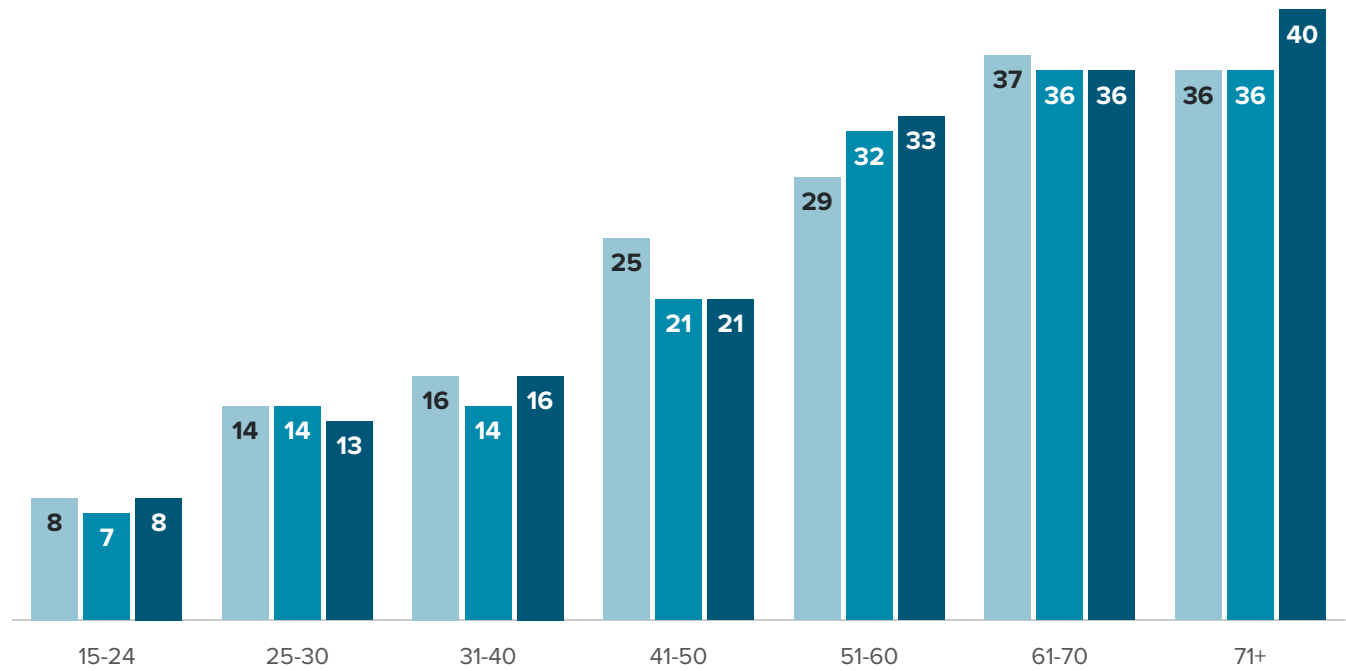


INSIGHT INTO PREVENTIVE CARE

Globally, women aged 51 to 60 and 71+ have seen the largest increases in reported testing rates since the Index’s inaugural report, with rates in each age group increasing four points in Year 3. The increases in testing among these age cohorts are important to monitor, as age 55 marks the peak age for detection of diabetes globally.³⁰

Percentage of Women Worldwide Tested for Diabetes in Past 12 Months by Age

■ Year 1 ■ Year 2 ■ Year 3





STD/STI TESTING

Few Women Checked for Diseases With Serious Consequences

In 2020, WHO estimated 374 million new infections with one of four curable STIs: chlamydia, gonorrhea, syphilis and trichomoniasis.³¹ As the COVID-19 pandemic persisted, many countries reported disruptions in STD/STI-related testing and care activities, which helped lead to a resurgence of STDs/STIs. Even countries with strong STI surveillance, such as the U.S. and Canada, have documented increases in syphilis, gonorrhea and chlamydia.^{32,33}

In Year 3, just 10% of women were tested for an STD/STI — leaving nearly 2 billion women of reproductive age at risk of infertility, increased maternal and fetal mortality, and deadly diseases.

Reported testing rates for STDs/STIs vary across countries. Lesotho, a small sub-Saharan African country, leads other countries in testing; **nearly half of women in Lesotho (48%) say they were tested for an STD/STI.**





On the other end of the spectrum, no women in Kuwait, where it is taboo to talk publicly about sex-related topics, report being tested for an STD/STI in the past 12 months.³⁴

In a host of other countries, including Vietnam, Indonesia, Lithuania, Morocco, Sri Lanka and Bangladesh, as few as 2% of women report being tested. In most of these countries, reported testing has been low and stable in all three years of the survey.

Countries/Territories With the Highest and Lowest Rates of STD/STI Testing

Percentage of women tested for STDs/STIs in past 12 months

Highest-Ranking Countries/Territories

 Lesotho	48
 Uganda	44
 South Africa	34
 Zambia	34
 Eswatini	33

Lowest-Ranking Countries/Territories

 Bangladesh	2
 Sri Lanka	2
 Morocco	2
 Lithuania	2
 Indonesia	2
 Vietnam	2
 Kuwait	0



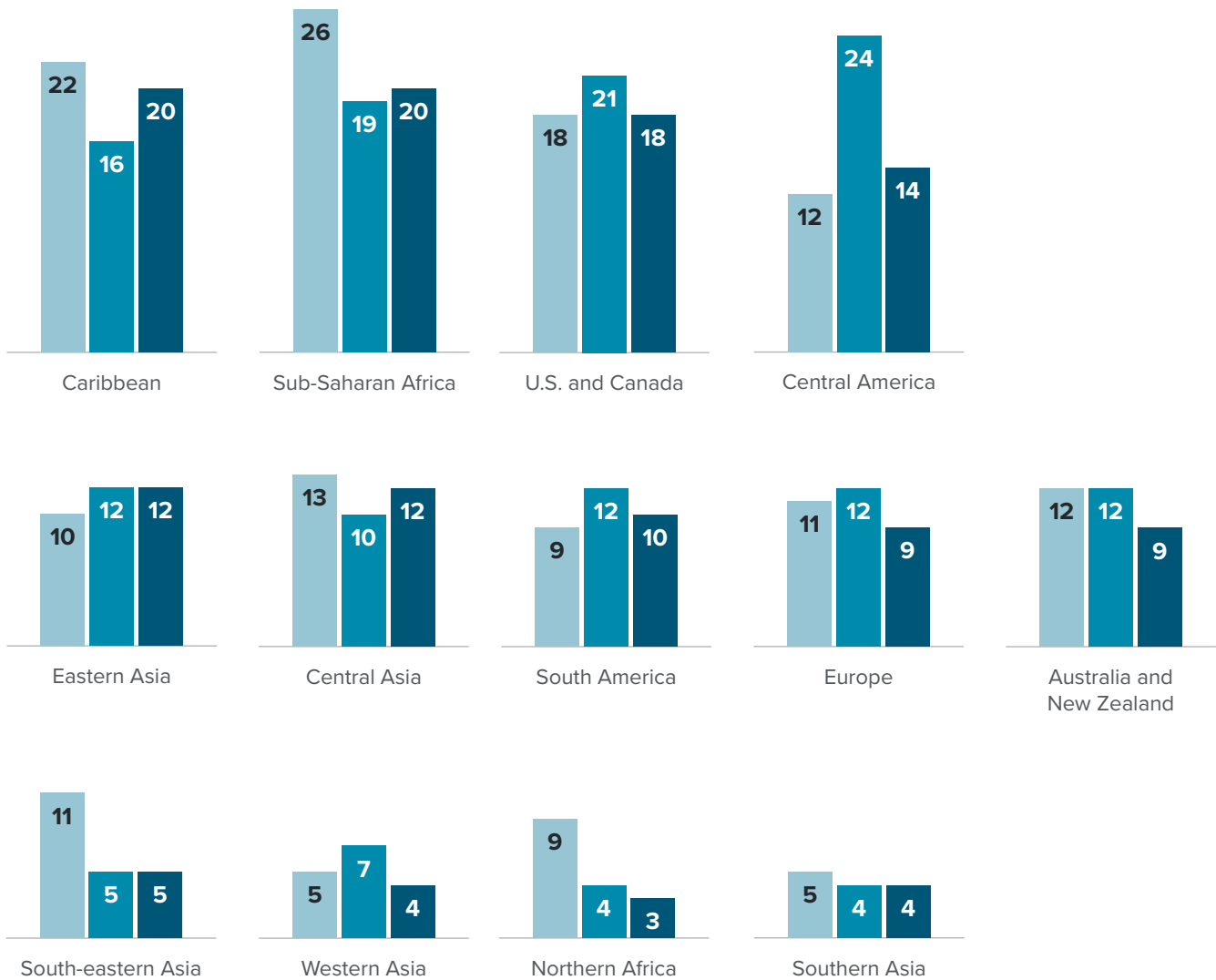
INSIGHT INTO PREVENTIVE CARE

At the regional level, it is notable that the STD/STI testing rate among women in sub-Saharan Africa declined from 26% in Year 1 to between 19% and 20% in Years 2 and 3.

This dip is concerning, especially because STDs/STIs can increase the risk of HIV transmission. If overall STD/STI testing rates do not improve in the region, gains in HIV prevention could be at risk.³⁵

Percentage of Women Worldwide Tested for STDs/STIs in Past 12 Months by Region

■ Year 1 ■ Year 2 ■ Year 3



Values are missing for the question regarding testing for STDs/STIs in the following countries: Iran and Pakistan in Southern Asia, and Jordan, Saudi Arabia, and Yemen in Western Asia.

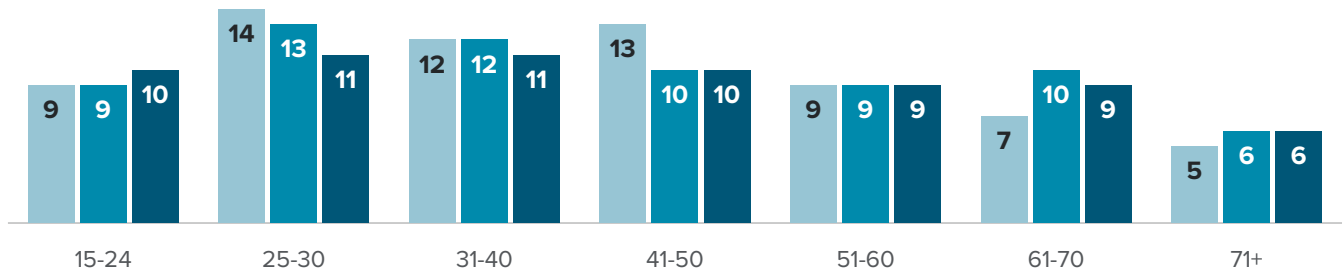


INSIGHT INTO PREVENTIVE CARE

Globally, it is also of concern that **young women aged 15 to 24 are no more likely to have been tested for STDs/STIs** than women in most other age groups, even though young women are at greater risk.³⁶

Percentage of Women Worldwide Tested for STDs/STIs in Past 12 Months by Age

■ Year 1 ■ Year 2 ■ Year 3







Emotional Health

Negative Emotions Rising, With Notable Gaps Between Women and Men

Stress, worry, sadness, anger and other emotions are all a normal part of life. When these feelings run high for extended periods, however, they can be overwhelming and interfere with a person’s ability to carry out everyday tasks.

Negative emotions can become unhealthy and signal more serious conditions, such as anxiety and depressive disorders or other mental health diagnoses. There is also consistent evidence that one’s emotional state can affect cardiovascular health and risk factors for other noncommunicable diseases with which mental disorders can co-occur, such as diabetes and cancer.^{37,38}

About four in 10 women experienced worry and stress during a lot of the previous day; three in 10 experienced sadness and one in four experienced anger.

These emotions were rising before the pandemic, but COVID-19 exacerbated them — exacting an even bigger toll on women’s health. Only stress is unchanged from Year 1.



INSIGHT INTO EMOTIONAL HEALTH

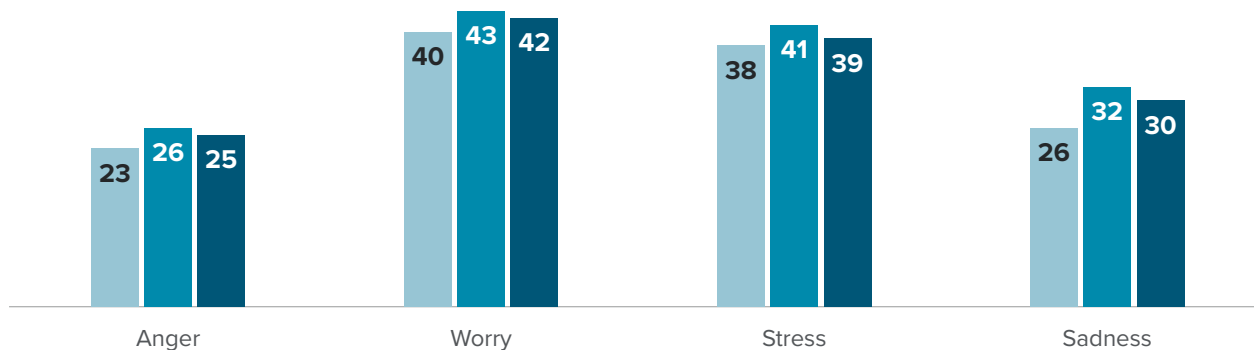
More women are sad, angry and worried now than they were three years ago. They are also much more likely than men to feel these emotions.

Negative Emotions Among Women Continue to Run High

Did you experience the following feelings during a lot of the day yesterday?

% Yes

■ Year 1 ■ Year 2 ■ Year 3





INSIGHT INTO EMOTIONAL HEALTH

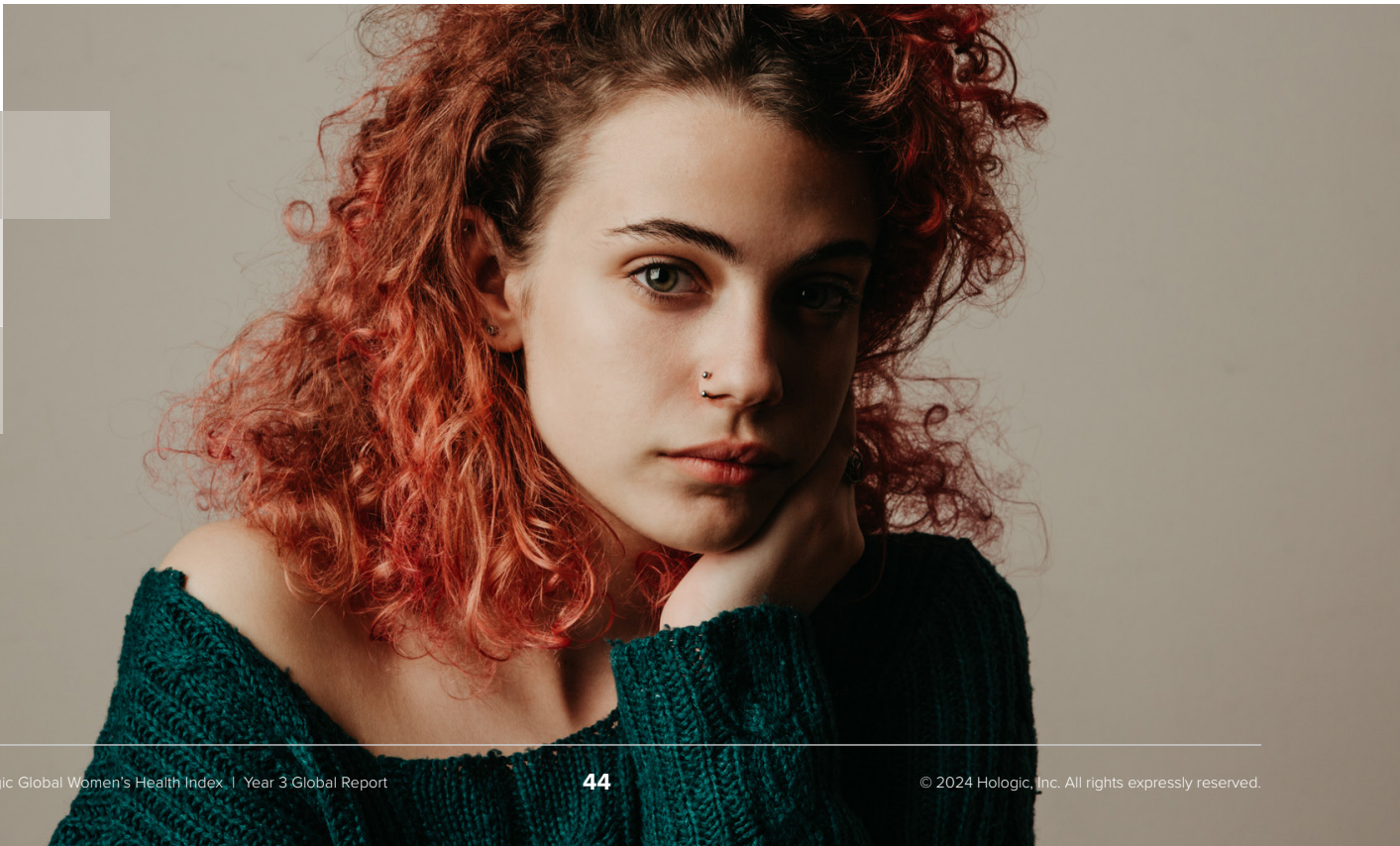
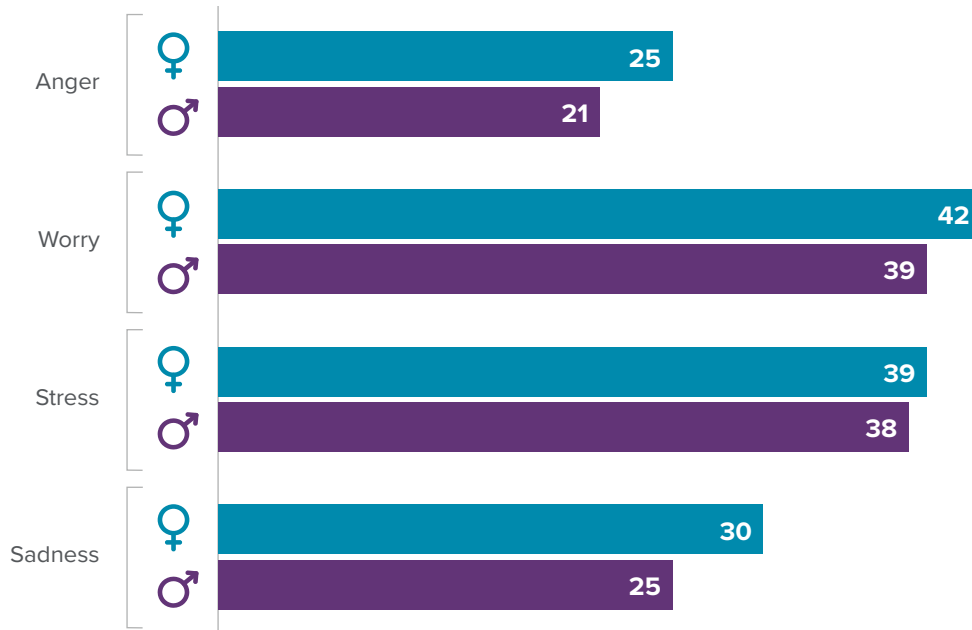
Women are more likely than men to report feeling negative emotions. For example, women are 20% more likely than men to say they experience sadness daily.

Negative Emotions in Year 3 by Gender

Did you experience the following feelings during a lot of the day yesterday?

% Yes

■ Women ■ Men



Measuring Emotional Health

Feelings and emotions are life's intangibles that “hard data” like GDP or mortality rates were not designed to capture. The Emotional Health dimension of the Hologic Global Women's Health Index gauges women's daily experiences of negative feelings with four questions that have been asked as part of Gallup's World Poll for more than a decade:

- *Did you experience the following feelings during a lot of the day yesterday? How about worry?*
- *Did you experience the following feelings during a lot of the day yesterday? How about sadness?*
- *Did you experience the following feelings during a lot of the day yesterday? How about stress?*
- *Did you experience the following feelings during a lot of the day yesterday? How about anger?*

Scores on this component are calculated at the individual level. To get a score, individuals need to answer at least three of the four questions. The resulting score is a simple mean of the positive answers. Higher scores on the Emotional Health dimension mean fewer women are experiencing negative feelings on a given day.

Emotional Health Dimension: Scores and Rankings

Higher scores on the Emotional Health dimension of the Index mean fewer women are experiencing negative feelings on a given day. Although higher scores on the individual questions within the Emotional Health dimension mean more women are experiencing these negative emotions, the dimension score is based on the women who do not say “yes” — the positive response to this question.



The Year 3 global score for Emotional Health is 66 out of 100






— up from 64 in Year 2, but below the 68 in Year 1.



A woman in Vietnam talks about her views during a survey with a Gallup World Poll interviewer.

Country Data Within the Emotional Health Dimension

Highest-Ranking Countries/Territories






Emotional Health Rank	Overall Index Rank	Country/Territory	Emotional Health Score	Overall Index Score	Emotional Health Score Change Y3-Y1	Emotional Health Score Change Y3-Y2
GLOBAL AVERAGE			66	54	-2 ↓	2 ↑
1	15	 Vietnam	89	64	21 ↑	20 ↑
2	31	 Kazakhstan	86	61	0	-2
3	1	 Taiwan, Province of China	86	72	-3	-2
4	2	 Kuwait*	84	68	N/A	N/A
5	9	 Poland	84	64	22 ↑	14 ↑
Average of Highest Ranked			86	66	10	8

N/A = Not asked in the comparison year.

*First appearance in the Index.

At the global level, changes must be at least two points higher or lower to be considered significant.
At the country level, changes must be at least five points higher or lower to be considered meaningful.

Lowest-Ranking Countries/Territories

Emotional Health Rank	Overall Index Rank	Country/Territory	Emotional Health Score	Overall Index Score	Emotional Health Score Change Y3-Y1	Emotional Health Score Change Y3-Y2
GLOBAL AVERAGE			66	54	-2 ↓	2 ↑
139	115	 Armenia	47	44	N/A	-9 ↓
140	141	 Sierra Leone	46	34	N/A	-3
141	122	 Northern Cyprus*	43	42	N/A	N/A
142	130	 Iraq	43	40	4	-7 ↓
143	142	 Afghanistan	38	26	N/A	16 ↑
Average of Lowest Ranked			43	37	4	-1

N/A = Not asked in the comparison year.

*First appearance in the Index.






At the global level, changes must be at least two points higher or lower to be considered significant.
At the country level, changes must be at least five points higher or lower to be considered meaningful.



Countries/Territories With Largest Increases and Declines From Year 2 to Year 3






Apart from Afghanistan, all countries and territories that saw meaningful gains on the Emotional Health dimension between Years 2 and 3 score above the global average of 66. Although Afghan women's scores have improved year over year, they still rank last in the world on this dimension. Majorities of Afghan women still experience daily stress, sadness and worry, but they are smaller majorities than in years past, and their experiences of anger dropped below the majority level to 43% in Year 3.

+ Largest Increases

Emotional Health Rank	Overall Index Rank	Country/Territory	Emotional Health Score	Emotional Health Score Change Y3-Y2
1	15	 Vietnam	89	20 ↑
143	142	 Afghanistan	38	16 ↑
40	28	 Greece	73	15 ↑
5	9	 Poland	84	14 ↑
24	32	 Thailand	76	11 ↑

All countries and territories that saw meaningful losses on the Emotional Health dimension between Years 2 and 3 experienced economic, political or even armed conflict in Year 3. The country with the largest decrease on this dimension, Ukraine, which fell 22 points, was invaded by Russia in early 2022.³⁹ All negative emotions soared among Ukrainian women as the conflict continued, but worry and anger more than doubled.

- Largest Declines

Emotional Health Rank	Overall Index Rank	Country/Territory	Emotional Health Score	Emotional Health Score Change Y3-Y2
118	91	 Nicaragua	56	-9 ↓
93	117	 Myanmar	63	-9 ↓
139	115	 Armenia	47	-9 ↓
135	134	 Morocco	51	-12 ↓
123	N/A	 Ukraine	54	-22 ↓

N/A: Due to the ongoing conflict in Ukraine, several questions could not be asked in that country. Because of these missing questions, Gallup could not calculate an overall Index score for Ukraine.



Demographic Data Within the Emotional Health Dimension

	Emotional Health Score	Y3-Y1 Change	Y3-Y2 Change	% Yes			
				Experienced anger	Experienced stress	Experienced sadness	Experienced worry
Age							
15-24	69	-1	2 ↑	26	35	25	36
25-30	65	-1	3 ↑	28	38	31	42
31-40	63	-3 ↓	1	30	43	30	44
41-50	65	-2 ↓	1	25	42	30	43
51-60	64	-3 ↓	2 ↑	22	38	35	48
61-70	66	-5 ↓	-2 ↓	19	34	35	45
71+	73	-5 ↓	1	14	28	29	37
Area							
Urban	68	-1	1	23	41	25	38
Rural	64	-3 ↓	2 ↑	27	37	34	45
Per Capita Income Quintiles							
Poorest 20%	59	-2 ↓	2 ↑	31	45	39	50
Second 20%	64	-1	3 ↑	26	40	32	45
Middle 20%	67	-2 ↓	1	25	37	28	42
Fourth 20%	71	-1	1	21	34	25	36
Richest 20%	70	-2 ↓	-1	23	36	24	36

At the global level, changes must be at least two points higher or lower to be considered significant. Quintiles based on respondent-reported income.



A woman in Kazakhstan talks about her views during a survey with a Gallup World Poll interviewer.



Gender Gaps in Emotional Health Widest in South and Central America and the Caribbean

All people feel negative emotions. Globally, however, women continue to be more likely than men to experience negative emotions daily.

Given the lack of gender-disaggregated mental and emotional health data in these regions, the annual availability of women's health data like these may be a particularly valuable resource.⁴⁰

Regionally, the gender gap in emotional health — with more women than men feeling these negative emotions — is most pronounced in South and Central America and the Caribbean, where double-digit gaps separate women and men on most of the negative emotions.

Percentage Point Differences Between Women and Men on Negative Emotions in Year 3

	Gender gap (women-men) in daily experiences of			
	Anger	Stress	Sadness	Worry
GLOBAL POPULATION	4	1	5	3
South America	10	16	12	10
Caribbean	4	16	13	12
Central America	4	9	11	5
Central Asia	4	8	7	10
Southern Asia	8	0	8	6
Western Asia	2	3	5	5
Europe	0	2	6	6
Australia and New Zealand	-2	5	10	4
Northern Africa	1	2	6	4
South-eastern Asia	6	4	3	0
U.S. and Canada	0	5	6	3
Sub-Saharan Africa	1	-1	3	2
Eastern Asia	4	-7	-2	-5

While the Index measures emotional health, which is separate from a clinical mental health diagnosis, there are relationships between chronic negative emotions and mental health conditions.

Studies have found depression is twice as frequent among women in Latin America and the Caribbean as it is among men.⁴¹

Further, for some mental and substance use conditions, nearly 90% of people in these regions will not receive the treatment they require.⁴²

There are underlying contributing factors that help explain why so many women in these regions are experiencing these emotions. Globally, women's experiences with health problems and pain (as measured on the Individual Health dimension) and their ability to afford food (as measured on the Basic Needs dimension) are related to a higher incidence of feeling negative emotions. These relationships are evident in South America, where women are more likely than men to experience physical pain (43% vs. 35%), have health problems (25% vs. 22%) and struggle to afford food (45% vs. 36%).

Percentage Point Differences Between Women and Men on Ability to Afford Food, Health Problems and Physical Pain in Year 3

	Gender gap (women-men)		
	Could not afford food at times	Have health problems that prevent them from doing things others their age normally can do	Experienced physical pain in the previous day
GLOBAL POPULATION	2	2	4
South America	9	3	8
Caribbean	-2	0	11
Central America	7	-2	2
Central Asia	4	4	8
Southern Asia	5	7	10
Western Asia	4	4	8
Europe	3	4	3
Australia and New Zealand	5	9	8
Northern Africa	1	6	9
South-eastern Asia	2	1	1
U.S. and Canada	3	5	4
Sub-Saharan Africa	-1	3	3
Eastern Asia	-5	-4	0





Opinions of Health and Safety

Women Feel No Safer, No More Satisfied With Healthcare

Women’s satisfaction with the availability of quality healthcare where they live and their perceptions of the quality of prenatal care in their communities are largely missing from standard global health statistics.

WHO estimates that worldwide, one woman dies every two minutes from preventable causes related to pregnancy and childbirth.⁴³ In environments where women feel personally safe, adolescent pregnancy rates and maternal mortality rates are lower and health expenditures per capita are higher.⁴⁴

Many women — including more than four in 10 young women between the ages of 15 and 24 — do not feel safe walking alone at night. And many women are dissatisfied with the availability of quality healthcare where they live.

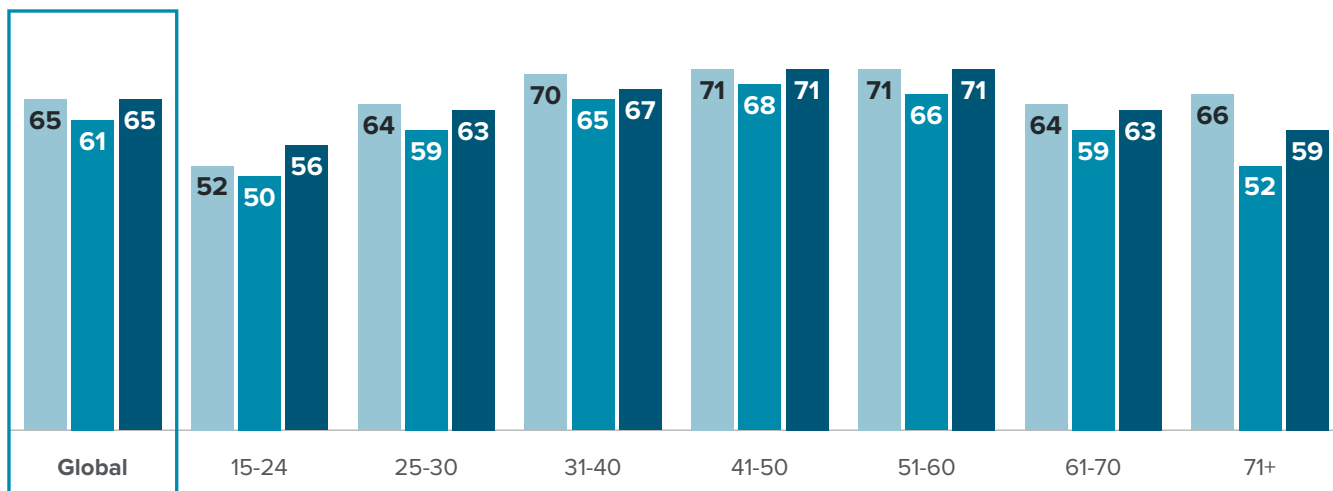


INSIGHT INTO OPINIONS OF HEALTH AND SAFETY

More than one in three women do not feel safe walking alone at night in their own community — meaning that nearly 1 billion women feel unsafe. However, while the proportion of women who feel unsafe is down slightly from Year 2, it is the same as the percentage in Year 1.

Percentage of Women Who Feel Safe Walking Alone at Night Where They Live by Age

■ Year 1 ■ Year 2 ■ Year 3



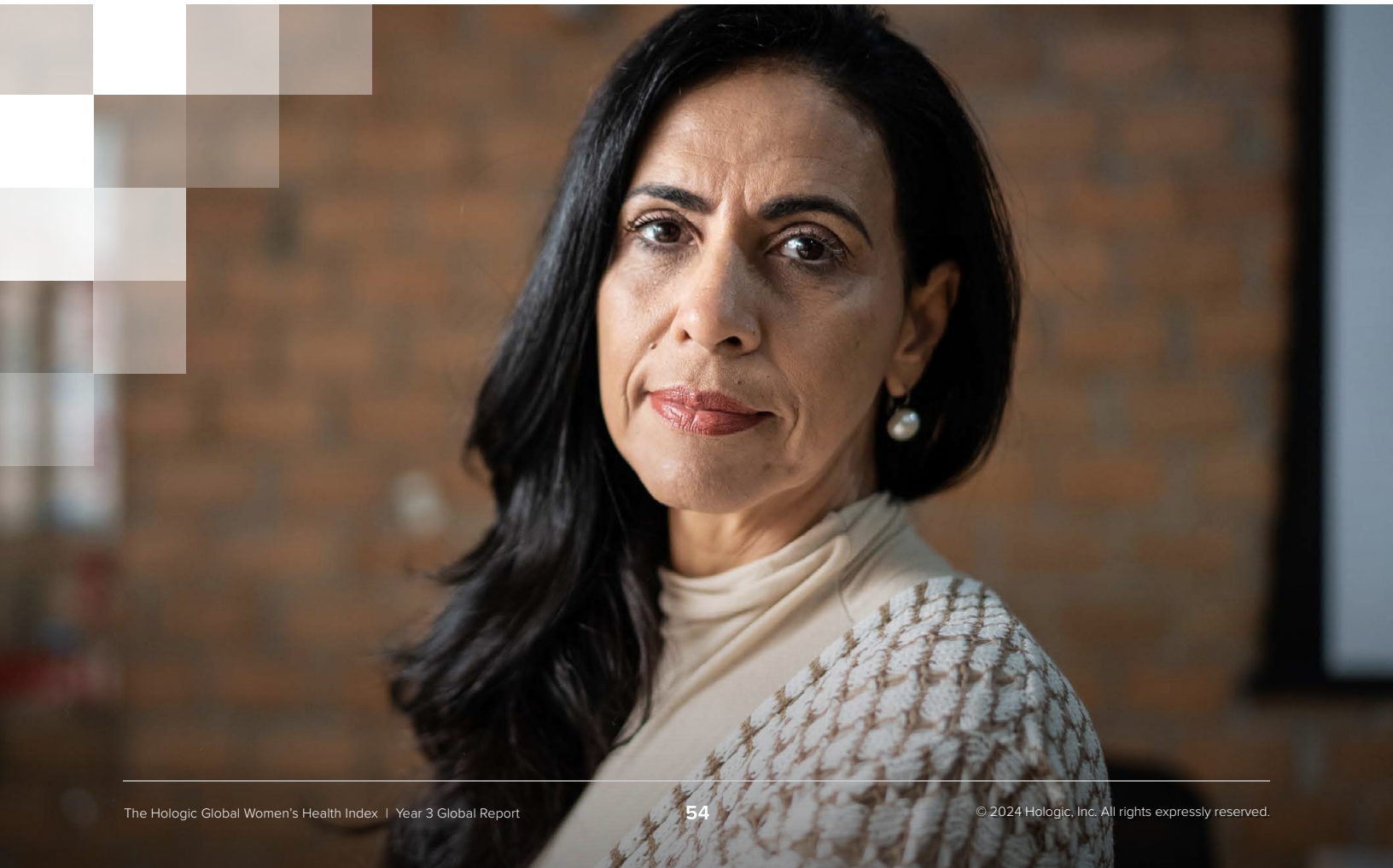


INSIGHT INTO OPINIONS OF HEALTH AND SAFETY

Nearly seven in 10 women are satisfied with the availability of quality healthcare where they live and believe most pregnant women in their communities receive high-quality prenatal care. Slightly more women feel this way in Year 3 than did in Year 2, but their attitudes are largely the same as in Year 1.

Women’s Perceptions of Quality Healthcare Availability and Prenatal Care

■ Year 1 ■ Year 2 ■ Year 3



Measuring Opinions of Health and Safety

The Opinions of Health and Safety dimension of the Hologic Global Women's Health Index gauges women's satisfaction with access to quality healthcare in general, whether they think pregnant women receive high-quality care and whether they feel safe walking alone at night. Three questions make up this dimension:

- *Do you think most pregnant women in the city or area where you live receive high-quality healthcare during their pregnancies, or not?*
- *In the city or area where you live, are you satisfied or dissatisfied with the availability of quality healthcare?*
- *Do you feel safe walking alone at night in the city or area where you live?*

Scores on this dimension are calculated at the individual level. To get a score, individuals need to answer at least two of the three questions. The resulting score is a simple mean of the positive answers. Higher scores on the Opinions of Health and Safety dimension mean more women feel safe and satisfied with the quality and availability of healthcare where they live.

Opinions of Health and Safety Dimension: Scores and Rankings

Higher scores on the Opinions of Health and Safety dimension mean more women feel safe and are satisfied with the quality and availability of healthcare where they live.








The global score for Opinions of Health and Safety in Year 3 is 70 out of 100, up from 66 in Year 2 but unchanged from Year 1.



A woman in Nepal talks about her views during a survey with a Gallup World Poll interviewer.

Country Data Within the Opinions of Health and Safety Dimension

▲ Highest-Ranking Countries/Territories






Opinions of Health and Safety Rank	Overall Index Rank	Country/Territory	Opinions of Health and Safety Score	Overall Index Score	Opinions of Health and Safety Score Change Y3-Y1	Opinions of Health and Safety Score Change Y3-Y2
GLOBAL AVERAGE			70	54	0	4 ↑
1	2	 Kuwait*	97	68	N/A	N/A
2	18	 United Arab Emirates	95	63	0	4
3	17	 Singapore	93	64	N/A	-4
4	55	 Tajikistan	90	57	4	1
5	1	 Taiwan, Province of China	89	72	4	1
Average of Highest Ranked			93	65	3	1

N/A = Not asked in the comparison year.

*First appearance in the Index.

At the global level, changes must be at least two points higher or lower to be considered significant.
At the country level, changes must be at least five points higher or lower to be considered meaningful.

▼ Lowest-Ranking Countries/Territories

Opinions of Health and Safety Rank	Overall Index Rank	Country/Territory	Opinions of Health and Safety Score	Overall Index Score	Opinions of Health and Safety Score Change Y3-Y1	Opinions of Health and Safety Score Change Y3-Y2
GLOBAL AVERAGE			70	54	0	4 ↑
138	124	 Peru	37	41	5 ↑	1
139	126	 Ecuador	35	41	-8 ↓	-1
140	135	 Gabon	33	39	0	0
141	120	 Venezuela	32	42	5 ↑	13 ↑
142	142	 Afghanistan	22	26	N/A	11 ↑
Average of Lowest Ranked			32	38	1	5

N/A = Not asked in the comparison year.






*First appearance in the Index.

At the global level, changes must be at least two points higher or lower to be considered significant.
At the country level, changes must be at least five points higher or lower to be considered meaningful.

Countries/Territories With Largest Increases and Declines From Year 2 to Year 3






Except for Mali and Lebanon, all countries and territories that saw meaningful gains on the Opinions of Health and Safety dimension between Years 2 and 3 score at or above the global average of 70. Mali's 17-point increase improved its score to 68, while the 14-point increase in Lebanon improved its score to 42. Even with this improvement, Lebanon still ranks among the lowest-scoring countries on this dimension, reflecting the ongoing political and economic turmoil gripping the country.

Largest Increases

Opinions of Health and Safety Rank	Overall Index Rank	Country/Territory	Opinions of Health and Safety Score	Opinions of Health and Safety Score Change Y3-Y2
46	56	 Jamaica	70	22 ↑
15	15	 Vietnam	85	18 ↑
50	106	 Mali	68	17 ↑
43	73	 El Salvador	71	15 ↑
131	110	 Lebanon	42	14 ↑

All countries and territories that saw meaningful losses on this dimension between Years 2 and 3 score well below the global average of 70. Scores in Sierra Leone dropped 11 points — ranking it among the lowest-scoring countries in the world in Year 3 — as the country was roiled by protests as well as a strike by the country's healthcare providers.⁴⁵

Largest Declines

Opinions of Health and Safety Rank	Overall Index Rank	Country/Territory	Opinions of Health and Safety Score	Opinions of Health and Safety Score Change Y3-Y2
69	101	 Nepal	64	-6 ↓
123	82	 Tunisia	44	-6 ↓
137	63	 Chile	38	-6 ↓
77	46	 Croatia	61	-10 ↓
136	141	 Sierra Leone	39	-11 ↓

Demographic Data Within the Opinions of Health and Safety Dimension

	Opinions of Health and Safety Score	Y3-Y1 Change	Y3-Y2 Change	% Yes		
				Think pregnant women receive high-quality healthcare	Satisfied with availability of quality healthcare	Feel safe walking alone at night
Age						
15-24	65	0	4 ↑	66	68	56
25-30	68	0	3 ↑	69	68	63
31-40	70	-2 ↓	3 ↑	72	68	67
41-50	73	-1	3 ↑	72	69	71
51-60	73	0	5 ↑	70	68	71
61-70	69	-3 ↓	3 ↑	67	65	63
71+	73	-5 ↓	5 ↑	67	72	59
Area						
Urban	72	0	2 ↑	70	72	65
Rural	68	-1	4 ↑	69	66	64
Per Capita Income Quintiles						
Poorest 20%	66	-1	5 ↑	65	64	61
Second 20%	69	-2 ↓	5 ↑	70	66	63
Middle 20%	70	-1	3 ↑	69	69	66
Fourth 20%	72	1	3 ↑	72	72	66
Richest 20%	73	-1	2 ↑	71	73	67

At the global level, changes must be at least two points higher or lower to be considered significant. Quintiles based on respondent-reported income.



A woman in Niger talks about her views during a survey with a Gallup World Poll interviewer.



SPOTLIGHT ON

Domestic Violence

While not part of the calculation of the Index, the issue of domestic violence is important to women's quality of life and longevity on its own. This is why Hologic and Gallup continue to ask women and men every year about the scope of domestic violence in their countries. According to the UN's most recent estimates, worldwide, more than five women were killed every hour in 2021 by a family member or intimate partner.⁴⁶

Due to the sensitivity of the topic, which is often taboo or could pose a risk to the respondent to speak openly about in many settings, the survey question frames the issue indirectly, allowing women and men to safely express their views on domestic violence in their country broadly without having to report on their own victimization or that of loved ones:

“Domestic violence can be physical, psychological, or involve sexual acts done to someone against their will by a person they live with. In your opinion, is domestic violence a widespread problem in [country name], or not?”

It's important to note that this question measures people's perceptions of domestic violence as a widespread problem. Rather than reflecting the incidence of domestic violence, respondents' answers may be a better indicator of their awareness of the seriousness of the challenge facing their countries.

While the pandemic seemed to create a new sense of urgency around making violence against women a global public health and policy priority, the findings show domestic violence is perceived as just as big of a problem in Year 3 as it was in Year 1, by both women and men.











In Year 3, two in three women worldwide (64%) say domestic violence is a widespread problem in their country. Nearly six in 10 men (56%) agree.



Globally, majorities of both women and men agree on the pervasiveness of the problem, but the gap between men and women's perceptions of domestic violence remains just as wide today as it was the first year that Hologic and Gallup asked the question. These gender gaps are important markers of leaders' willingness and interest in developing and enforcing laws to prevent and respond to domestic violence, as well as to invest in evidence-based prevention programs and response services for survivors.

The gender divides are more than twice the size of the global gap in a host of countries that illustrate how the issue of domestic violence transcends income, education and culture.

When looking at the 10 countries with the biggest gaps in men’s and women’s perceptions, four — **Canada, Norway, Sweden and South Korea** — rank in the top 20 countries with the highest scores on the UN Human Development Index.⁴⁷

Country/Territory	% Women who say domestic violence is widespread	% Men who say domestic violence is widespread	Percentage point gender gap (women-men)	% Women who have experienced physical and/or sexual violence ⁴⁸	UN Human Development Index ⁴⁹
 Pakistan	84	52	32	29	.544
 Latvia	73	44	29	25	.863
 Lithuania	61	35	26	22	.875
 Canada	81	57	24	44	.936
 Norway	52	30	22	20	.961
 Russian Federation	57	36	21	*	.822
 Slovenia	79	61	18	18	.918
 Armenia	65	47	18	10	.759
 Sweden	71	53	18	21	.947
 South Korea	62	45	17	*	.925

*Data unavailable.

In these 10 countries, which all have at least a 17-point gap between men’s and women’s perceptions of domestic violence as a problem, incidence rates remain relatively high. At least one in 10 women in these countries will experience domestic or intimate partner violence in their lifetime. Together, these data illustrate how difficult it will be to achieve SDG target 5.2.1, which calls for the elimination of violence against women and girls.⁵⁰

To help change these gender dynamics, countries must prioritize evidence-based prevention and response programs and policies that transform social norms and behaviors that sustain domestic violence and other forms of violence against women.

Prevention of domestic violence requires engagement of all stakeholders, including men and boys. In addition to prevention, countries must continue to invest in survivor-centered and trauma-informed services. This requires capacity strengthening across multiple sectors, including justice, law enforcement, healthcare and housing in partnership with women-led organizations and other advocacy groups.

Although evidence is lacking, meta-analyses suggest that engaging men and boys as primary prevention advocates is still in its infancy and mostly focused on individual, rather than systemic, change.⁵¹ Much work remains to gain universal recognition of domestic violence as an urgent, widespread societal challenge.⁵²





SECTION 4

Basic Needs

Nearly 1 Billion Women Still Struggling to Afford Food

Having enough safe and nutritious food to eat and safe, affordable housing are two basic needs for healthy living. Adults who lack regular access to enough safe and nutritious food are disproportionately at risk for obesity and chronic diseases. Hunger or undernourishment is also a leading risk factor for death and other negative health outcomes — leading to 9 million deaths a year, more than the death toll from AIDS, malaria and tuberculosis combined.⁵³

In the Year 3 survey, 36% of women couldn't afford the food their families needed. While this is slightly higher than the 34% in Year 1, it is largely attributable to the addition of 22 countries in Year 3, the majority of which are lower- and middle-income countries. Without these countries included, the percentage of women struggling to afford food in Year 3 is 34% — the same percentage as in Year 1. The Year 3 figure is one percentage point lower than the 37% who reported struggling in Year 2.

Three in 10 women worldwide — which translates into nearly 1 billion women — say they cannot afford the food or shelter that they or their families need.



INSIGHT INTO BASIC NEEDS

Three in 10 women say there have been times in the past year when they were unable to afford adequate shelter or housing for themselves or their families. While the percentages have remained unchanged for the past three years of the Index, in Gallup's historical trends on this question, the percentage of women struggling to afford shelter has almost doubled in the past decade.

Women Struggling to Afford Basic Needs

■ Year 1 ■ Year 2 ■ Year 3



Measuring Basic Needs

The Basic Needs dimension of the Hologic Global Women's Health Index gauges women's ability to meet their basic needs with two questions that Gallup's World Poll has asked for more than a decade:

- *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?*
- *Have there been times in the past 12 months when you did not have enough money to provide adequate shelter or housing for you and your family?*

Scores on this dimension are calculated at the individual level. To get a score, individuals need to answer both questions. The resulting score is a simple mean of the positive answers. Higher scores on the Basic Needs dimension mean fewer women are struggling to afford the food and shelter they need.

Basic Needs Dimension: Scores and Rankings

Higher scores on the Basic Needs dimension mean fewer women in a country are struggling to afford the food and shelter they need.



The global score for Basic Needs in Year 3 is 67 out of 100, which is statistically unchanged from Years 1 and 2.



A woman in Benin talks about her views during a survey with a Gallup World Poll interviewer.



Country Data Within the Basic Needs Dimension

▲ Highest-Ranking Countries/Territories

Basic Needs Rank	Overall Index Rank	Country/Territory	Basic Needs Score	Overall Index Score	Basic Needs Score Change Y3-Y1	Basic Needs Score Change Y3-Y2
GLOBAL AVERAGE			67	54	-1	1
1	21	Sweden	97	63	4	0
2	6	Israel	96	66	7 ↑	1
3	12	Netherlands	95	64	-1	3
4	1	Taiwan, Province of China	94	72	1	0
5	9	Poland	94	64	4	5 ↑
Average of Highest Ranked			95	66	3	2

N/A = Not asked in the comparison year.

*First appearance in the Index.

At the global level, changes must be at least two points higher or lower to be considered significant.

At the country level, changes must be at least five points higher or lower to be considered meaningful.

▼ Lowest-Ranking Countries/Territories

Basic Needs Rank	Overall Index Rank	Country/Territory	Basic Needs Score	Overall Index Score	Basic Needs Score Change Y3-Y1	Basic Needs Score Change Y3-Y2
GLOBAL AVERAGE			67	54	-1	1
139	96	Kenya	31	47	-2	-8 ↓
140	139	The Democratic Republic of the Congo*	30	36	N/A	N/A
141	125	Niger*	28	41	N/A	N/A
142	138	Benin	27	37	-11 ↓	-13 ↓
143	142	Afghanistan	19	26	N/A	-6 ↓
Average of Lowest Ranked			27	37	-7	-9

N/A = Not asked in the comparison year.

*First appearance in the Index.

At the global level, changes must be at least two points higher or lower to be considered significant.






At the country level, changes must be at least five points higher or lower to be considered meaningful.



Countries/Territories With Largest Increases and Declines From Year 2 to Year 3







Even with higher scores on this dimension in Year 3, three countries, Türkiye, Zambia and Cambodia, post scores on the Basic Needs dimension that are lower than the global average of 67. In Cambodia, the majority of women struggle to afford both food (61%) and shelter (53%).

+ Largest Increases

Basic Needs Rank	Overall Index Rank	Country/Territory	Basic Needs Score	Basic Needs Score Change Y3-Y2
72	103	 Türkiye	62	17 ↑
59	59	 Russian Federation	69	14 ↑
48	15	 Vietnam	82	13 ↑
112	87	 Cambodia	43	11 ↑
101	75	 Zambia	46	11 ↑

Apart from Malaysia, the countries with the biggest meaningful declines all score below the global average on the Basic Needs dimension in Year 3. In Benin, which posted the lowest score on this dimension of the group, 79% of women struggled to afford food and 65% could not afford shelter at times.

- Largest Declines

Basic Needs Rank	Overall Index Rank	Country/Territory	Basic Needs Score	Basic Needs Score Change Y3-Y2
121	88	 Panama	40	-13 ↓
142	138	 Benin	27	-13 ↓
63	41	 Malaysia	68	-14 ↓
84	32	 Thailand	56	-14 ↓
76	74	 Republic of Moldova	59	-14 ↓
81	98	 Pakistan	56	-15 ↓



Demographic Data Within the Basic Needs Dimension

	Basic Needs Score	Y3-Y1 Change	Y3-Y2 Change	% Yes	
				Could not afford food at times	Could not afford shelter at times
Age					
15-24	63	-5 ↓	-2 ↓	39	33
25-30	64	0	1	39	33
31-40	64	-2 ↓	0	40	32
41-50	68	2 ↑	0	34	30
51-60	68	-1	3 ↑	36	28
61-70	71	-6 ↓	-1	31	26
71+	81	-6 ↓	1	21	17
Area					
Urban	73	1	-1	29	25
Rural	62	-3 ↓	2 ↑	42	34
Per Capita Income Quintiles					
Poorest 20%	57	-1	0	49	37
Second 20%	63	0	3 ↑	41	33
Middle 20%	68	-3 ↓	2 ↑	35	29
Fourth 20%	72	-3 ↓	-2 ↓	29	27
Richest 20%	75	-1	-3 ↓	26	24

At the global level, changes must be at least two points higher or lower to be considered significant. Quintiles based on respondent-reported income.

COUNTRY SPOTLIGHT ON BASIC NEEDS



Bangladesh

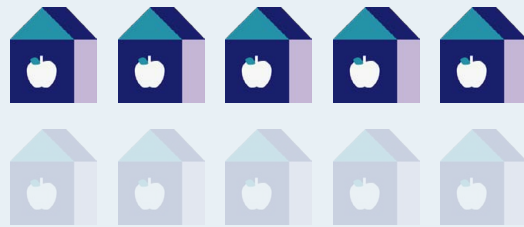
Dramatic Increase in Women's Inability to Meet Basic Needs



Year 3 saw a continuing decline in Bangladeshi women's ability to meet their basic needs — as both food and shelter insecurity continue to rise.

The proportion of women who struggled to afford food increased by 30 points over two years, and the proportion struggling to afford shelter more than doubled, increasing 34 points.

Global economic conditions and inflation have contributed to the worsening situation in Bangladesh, where inflation hit a 10-year high at the time of the survey. In May 2023, inflation surpassed the 9.52% record set last August (during the Year 3 survey data collection), soaring to 9.94%.



More than five in 10 households reported borrowing money, going into debt or selling assets to buy food.^{54,55}

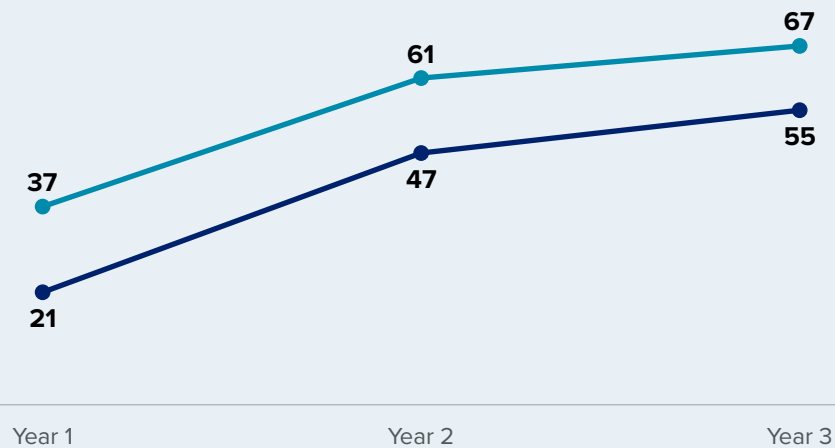
COUNTRY SPOTLIGHT ON BASIC NEEDS

In addition, climate change is affecting the agricultural system in Bangladesh.⁵⁶

Catastrophic flooding, droughts and rising seawater levels are forcing systemic changes to farming, water collection, sanitation and other basic functions to support day-to-day life. The effects of these changes are not gender neutral, with women bearing the brunt. Data from the Index can inform efforts to develop more gender-responsive monitoring and evaluation of the consequences of climate change in Bangladesh, as called for by the UN.⁵⁷

More Bangladeshi Women Struggling to Afford the Basics

● % Struggled to afford food ● % Struggled to afford shelter







Individual Health

Physical Pain Is a Significant Problem

Health-related statistics such as disease rates, life expectancy and maternal mortality are standard metrics that can provide a great deal of insight into a country's overall health. However, these standard measures are limited, utilitarian and often not available annually. They also shed little light on how health problems affect women's daily lives.

The Individual Health dimension looks at two critical, but often overlooked, measures: women's experiences of physical pain and health problems.

Nearly a billion women — one in three — say they spent a lot of the previous day in physical pain. And one in four women — which translates into nearly 700 million — have health problems that keep them from doing normal activities.



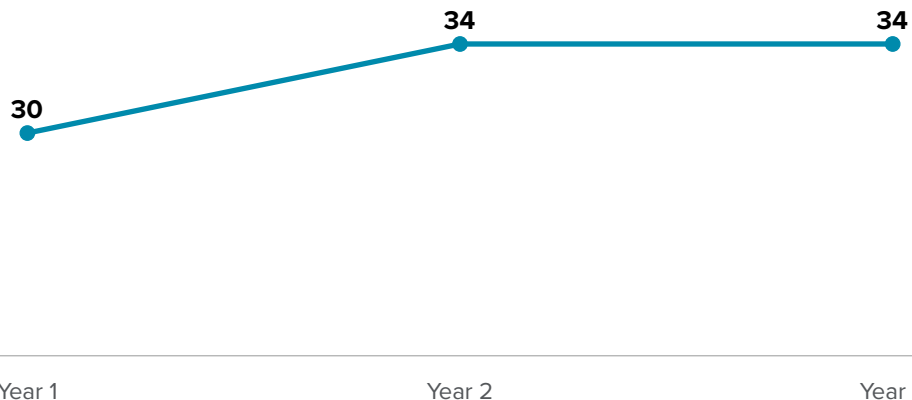
INSIGHT INTO INDIVIDUAL HEALTH

Thirty-four percent of women report experiencing physical pain during a lot of the previous day — which is the same as the 34% who reported this in Year 2, but up from 30% in Year 1. In all three years, more women than men have reported experiencing physical pain.

Women in Physical Pain Daily

Did you experience the following feelings during a lot of the day yesterday? How about physical pain?

● % Yes





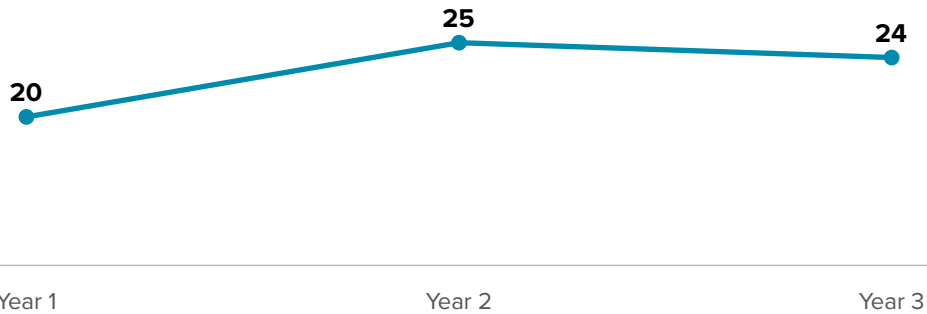
INSIGHT INTO INDIVIDUAL HEALTH

Twenty-four percent of women say they have health problems that prevent them from doing things people their age normally can do — statistically the same as the 25% in Year 2 who said this, but up from 20% in Year 1.

Women’s Experience of Health Problems

Do you have any health problems that prevent you from doing any of the things people your age normally can do?

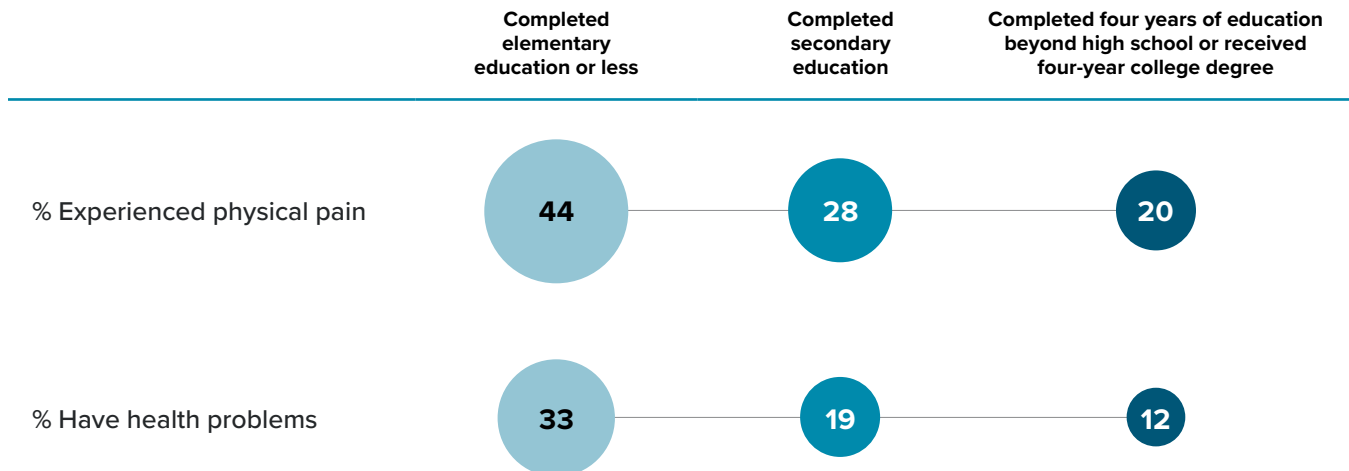
● % Yes



INSIGHT INTO INDIVIDUAL HEALTH

Women with an elementary education or less are disproportionately affected by daily pain and health problems. This coincides with a declining belief among less educated women that checkups with a health professional improve health.

Women’s Individual Health Varies With Education



Measuring Individual Health

The Individual Health dimension of the Hologic Global Women's Health Index gauges women's daily experiences of pain and health problems with two questions that have been asked as part of Gallup's World Poll for more than a decade:

- *Did you experience the following feelings during a lot of the day yesterday? How about physical pain?*
- *Do you have any health problems that prevent you from doing any of the things people your age normally can do?*

Scores on this dimension are calculated at the individual level. To get a score, individuals need to answer both questions. The resulting score is a simple mean of the positive answers. Higher scores on the Individual Health dimension mean fewer women are experiencing health problems and pain on a given day.

Individual Health Dimension: Scores and Rankings

Higher scores on the Individual Health dimension mean fewer women are experiencing health problems and pain on a given day.








The global score for Individual Health in Year 3 is 71 out of 100, which is unchanged from Year 2 but down from 75 in Year 1.



A woman in Chad talks about her views during a survey with a Gallup World Poll interviewer.

Country Data Within the Individual Health Dimension

▲ Highest-Ranking Countries/Territories






Individual Health Rank	Overall Index Rank	Country/Territory	Individual Health Score	Overall Index Score	Individual Health Score Change Y3-Y1	Individual Health Score Change Y3-Y2
GLOBAL AVERAGE			71	54	-4 ↓	0
1	15	 Vietnam	89	64	6 ↑	4
2	9	 Poland	87	64	14 ↑	10 ↑
3	6	 Israel	87	66	5 ↑	3
4	2	 Kuwait*	86	68	N/A	N/A
5	1	 Taiwan, Province of China	85	72	0	-3
Average of Highest Ranked			87	67	6	4

N/A = Not asked in the comparison year.

*First appearance in the Index.

At the global level, changes must be at least two points higher or lower to be considered significant.
At the country level, changes must be at least five points higher or lower to be considered meaningful.

▼ Lowest-Ranking Countries/Territories

Individual Health Rank	Overall Index Rank	Country/Territory	Individual Health Score	Overall Index Score	Individual Health Score Change Y3-Y1	Individual Health Score Change Y3-Y2
GLOBAL AVERAGE			71	54	-4 ↓	0
139	138	 Benin	48	37	-21 ↓	-7 ↓
140	128	 Mauritania*	47	41	N/A	N/A
141	130	 Iraq	45	40	-8 ↓	-5 ↓
142	141	 Sierra Leone	41	34	N/A	-18 ↓
143	137	 Chad*	39	37	N/A	N/A
Average of Lowest Ranked			44	38	-15	-10

N/A = Not asked in the comparison year.






*First appearance in the Index.

At the global level, changes must be at least two points higher or lower to be considered significant.
At the country level, changes must be at least five points higher or lower to be considered meaningful.

Countries/Territories With Largest Increases and Declines From Year 2 to Year 3






Except for Lebanon, all countries and territories that saw meaningful increases between Year 2 and Year 3 on the Individual Health dimension post scores above the global average of 71. Higher scores in Mexico, Poland and Türkiye vaulted these countries to the top of the rankings on this dimension in Year 3, with Poland ranking second in the world.

Largest Increases

Individual Health Rank	Overall Index Rank	Country/Territory	Individual Health Score	Individual Health Score Change Y3-Y2
12	103	 Türkiye	79	11 ↑
2	9	 Poland	87	10 ↑
63	110	 Lebanon	69	8 ↑
34	46	 Croatia	73	8 ↑
10	69	 Mexico	80	8 ↑

All countries and territories that saw meaningful losses between Year 2 and Year 3 on the Individual Health dimension post scores well below the global average. Sierra Leone saw the biggest decline in the group year over year and ranks almost last in the world on this dimension.

Largest Declines

Individual Health Rank	Overall Index Rank	Country/Territory	Individual Health Score	Individual Health Score Change Y3-Y2
108	135	 Gabon	60	-10 ↓
132	74	 Republic of Moldova	52	-10 ↓
113	117	 Myanmar	59	-11 ↓
133	134	 Morocco	52	-12 ↓
142	141	 Sierra Leone	41	-18 ↓



Demographic Data Within the Individual Health Dimension

	Individual Health Score	Y3-Y1 Change	Y3-Y2 Change	% Yes	
				Have health problems	Experienced physical pain
Age					
15-24	81	-3 ↓	1	13	25
25-30	77	-4 ↓	1	16	31
31-40	75	-3 ↓	0	18	33
41-50	69	-3 ↓	1	26	36
51-60	59	-3 ↓	-2 ↓	38	44
61-70	53	-6 ↓	-4 ↓	47	47
71+	56	-6 ↓	0	43	45
Area					
Urban	76	0	-1	19	29
Rural	67	-7 ↓	1	28	38
Per Capita Income Quintiles					
Poorest 20%	64	-3 ↓	0	28	43
Second 20%	68	-4 ↓	1	27	36
Middle 20%	70	-7 ↓	-1	25	34
Fourth 20%	75	-4 ↓	-2 ↓	19	30
Richest 20%	77	-3 ↓	0	19	27

At the global level, changes must be at least two points higher or lower to be considered significant. Quintiles based on respondent-reported income.

The Individual Health experiences of rural women are also getting worse. Rural women were near parity with urban women on this dimension in Year 1, but a gap opened in Year 2 that has not closed. A nine-point gap separates them on both physical pain and health problems in Year 3.

COUNTRY SPOTLIGHT ON INDIVIDUAL HEALTH

Finland

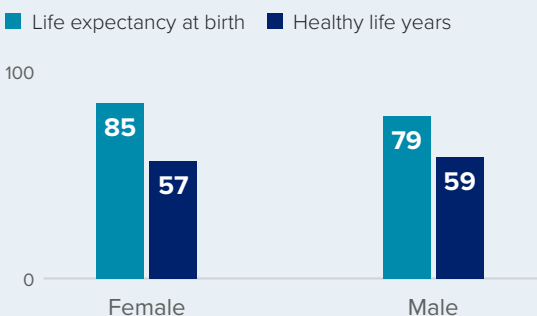
Chronic Pain, Health Conditions Mean Fewer Quality Years for Women



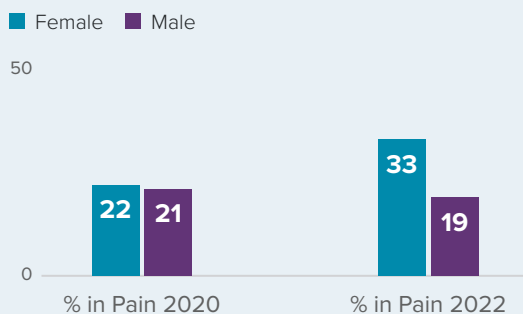
While the Index is focused on the globally consistent factors associated with longer lives for women, it is also important to understand the quality of the additional years. The European Union conducted a study to determine the number of healthy life years expected for citizens within each of its member states. Healthy life years, also known as disability-free life expectancy (DFLE), are defined as the number of years that a person is expected to continue to live in a healthy condition.^{58,59}

Overlaying life expectancy at birth, healthy life years, and women’s self-reported experiences of pain and health problems illustrates the toll additional years can take on women. While Finnish women are expected to live six years beyond the average life of a Finnish man, they can expect to live two fewer healthy life years. This net of eight more non-healthy years among women versus men is among the highest in the EU.⁶⁰

Life Expectancy at Birth and Healthy Life Years for Finnish Women and Men



Experience of Pain in Previous Day Among Finnish Women and Men



Within the context of the Index data, the picture of these additional years becomes even more clear, with 33% of women reporting they were in pain the day before, compared with 19% of men. **This disparity is 13 points larger today than in Year 1.** The contributing factors to these large gaps are complex, but undoubtedly they serve as a call to address the unique needs of Finnish women as they age.

Conclusion

This year's Index should serve as a global wake-up call.

The data in this report lead to an inescapable conclusion: Across most dimensions, women's health is seriously at risk. And even where we're seeing improvements, the pace of progress is far too slow.

If we don't do more, and quickly, billions of women will suffer. The next generation of girls and young women will be at even greater risk. And any hope of achieving the SDGs by 2030 will be lost.

To reignite progress in women's health, urgent action is required from partners worldwide.

- 1 Global leaders — including governments, funders, UN agencies and other international institutions — must make good on their commitments, including pledges to include women and girls in decision-making that affects their health and lives.
- 2 Countries must prioritize and commit funding to advance women's health and safety.
- 3 Women's health advocates must engage broader coalitions of partners to ensure that women's health and safety are prioritized across movements — from disaster relief to economic empowerment to environmental protection.

Hologic hopes that the Index will continue to inspire and guide these efforts. It will also be an important accountability tool, tracking indicators aligning with or complementing global commitments, including the SDGs.

We can meaningfully improve the health and well-being of all women for generations to come if we follow the roadmap set out in this Index. The data are clear. Now, let's seize the opportunity.



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Developing the Hologic Global Women's Health Index

The goal of the Hologic Global Women's Health Index is to contribute to extending the life expectancy of women around the world and improving their quality of life. The ultimate outcome of the partnership with Gallup is to create a global measure to track progress in key aspects of women's health and well-being that informs change to improve women's health in the future.

The Gallup World Poll has collected data since 2005 in more than 160 countries and territories and over 140 languages. To consistently and accurately collect data on the same indicators from a wide range of respondents in different countries and territories, questions are rigorously tested to ensure clarity and precision so that they are easily translated, well understood and interpreted across cultures.

Why an Index?

An Index provides the opportunity to summarize the multidimensional construct we are measuring — factors contributing to women's health — in an easy-to-interpret way. This produces a tool to assess progress over time and captures the interest of both the public and policymakers. This means that it will be easier to communicate complex ideas and promote accountability.

It is important to clearly communicate what the Index captures to not oversimplify complex issues and topics and to avoid overstating policy conclusions. We are transparent with our methodology and what the Index does and does not measure, including the weighting process used to combine the variables.

Development of the Hologic Global Women's Health Index

1 Theoretical framework development

In consultation with a wide and growing list of experts, Hologic and Gallup set out to understand which key metrics would be most salient to a women-reported Index of health at the national level.

The World Health Organization (WHO) listed the top 10 issues for women's health 20 years after countries signed pledges in the 1995 Beijing Declaration and Platform for Action, adding that women still face many health problems, which we must recommit to address (Bustreo, 2015).

These included:

- cancer
- reproductive health
- maternal health
- HIV
- sexually transmitted diseases (STDs) and sexually transmitted infections (STIs)
- violence against women
- mental health
- noncommunicable diseases
- age-related issues (teenage pregnancies; older women may have fewer pensions and benefits, less access to healthcare and social services, and greater risk of poverty, compounded by the more widespread health challenges associated with old age)

An additional list put forth by the WHO in 2020 indicates top health checks for women, which include: blood pressure, blood glucose tests, body mass index, bone density screening, breast cancer detection, colon cancer detection, dental checkups, lipid profile checks and screening for cervical cancer (Pap smears and HPV testing) (WHO, 2020b).

While not all of these issues can accurately be measured in a non-epidemiological social science survey, they convey that women's health is a combination of physical, social, economic and political factors (culture, poverty, discrimination, violence, system of provision of health services, geographical location, etc.).

This process of working with experts and existing knowledge sources identified three key objectives of the survey:

- 1) Capture knowledge, attitudes and behaviors (KAB model) related to health, which is a common framework for health surveys across many cultures and languages (Bhattacharya et al., 2018; Fan et al., 2018; Mustafa et al., 2008; Okobia et al., 2006; Zhang et al., 2020).
- 2) Focus on female-specific health issues:
 - a. prenatal health, pregnancy and delivery
 - b. health consequences of gender-based violence: sexual and physical violence
 - c. increasingly common causes of death: heart and lung disease, cervical, lung and breast cancer, and obesity
 - d. aging-related and noncommunicable diseases, which are increasing while infectious diseases are decreasing — making preventive care essential
- 3) Bring attention to actionable areas to increase female longevity:
 - a. increasing years of education to improve the life expectancy, independence and earning power of women
 - b. reducing domestic violence, sexual assault and femicide
 - c. diagnosing conditions early so they are effectively treated and having services to provide care on an ongoing basis
 - d. decreasing neonatal and infant mortality, as well as maternal mortality

2 Indicator and data selection

The Gallup World Poll already includes items that cover general health and quality of life, opinions of general health, safety and victimization, food and shelter insecurity, and emotional health and well-being. Because the Gallup World Poll creates nationally representative samples in each country, the survey is intended for both male and female respondents. Accordingly, the survey questions should be as broadly applicable as possible.

Building on these existing items, Gallup and Hologic developed the following module to field starting in 2020. These items were cognitively tested in seven countries: Nigeria (Yoruba and English), Kyrgyzstan (Russian), Vietnam (Vietnamese), United States (English), United Kingdom (English), Peru (Spanish) and Tunisia (Arabic). This process helped refine the final survey questionnaire and ensured that questions are well interpreted and understood across different countries, cultures and languages.

These questions are also discussed in greater detail in the subsequent section.

Hologic Survey Module Included in the Gallup World Poll

Topic	Question	Why It Matters
Value of preventive care	<ul style="list-style-type: none"> Do you think going to a healthcare professional, such as a medical doctor or a nurse, at least once every 12 months for a checkup, can help people improve their health, or not? 	<p>Knowledge and attitudes toward preventive healthcare are the first two dimensions of “knowledge, attitudes and behaviors theory” (KAB). KAB is a health behavior theory of change wherein the change in human behavior is divided into three successive processes, namely, acquisition of the right knowledge, generation of attitudes and adoption of behaviors (or practices) (Bhattacharya et al., 2018; Fan et al., 2018; Mustafa et al., 2008; Okobia et al., 2006; Zhang et al., 2020).</p>
Experience of preventive care	<ul style="list-style-type: none"> In the past 12 months, have you talked to a healthcare professional, such as a medical doctor or nurse, about your own health? To the best of your knowledge, were you tested for any of the following in the past 12 months? [High blood pressure, cancer, diabetes, STDs/STIs]? 	<p>Knowledge and attitudes need to lead to concrete behaviors, which are shaped by individual and social barriers.</p> <ul style="list-style-type: none"> Heart disease is the leading cause of death in both men and women (CDC, 2020b). Men and women are susceptible to different types of cancer, and testing is crucial to early diagnosis and increasing the odds of successful treatment (CDC, 2020a). Obesity and diabetes-related diseases are a growing concern around the world and are associated with heart disease, as well as increased incidence of certain cancers (CDC, 2021b). STDs/STIs have an outsized impact on women’s reproductive health and fertility (compared to men) (CDC, 2021a).

Topic	Question	Why It Matters
Prenatal care	<ul style="list-style-type: none"> Do you think most pregnant women in the city or area where you live receive high-quality healthcare during their pregnancies, or not? 	Perceptions of the quality of prenatal care are lacking in global statistics — a critical dimension of women’s healthcare experiences throughout their lives.
Pregnancy	<ul style="list-style-type: none"> How many children do you, personally, have? How old were you the first time you were pregnant? 	A woman’s age of first pregnancy and number of children have a strong relationship with years of education, employability, household income, time available to manage personal health, mental health, etc. (PRB, 2011; UNFPA, 2021a; UNICEF, 2021; World Bank, 2021).
Domestic violence	<p>Now I would like to ask you a question regarding domestic violence. Domestic violence can be physical, psychological, or involve sexual acts done to someone against their will by a person they live with. In your opinion, is domestic violence a widespread problem in [country name], or not?</p>	Perceptions of widespread domestic violence can vary for different groups (e.g., men vs. women). In addition, the psychological burden of believing domestic violence is widespread could be tied to negative well-being outcomes.

Value of Preventive Care

Do you think going to a healthcare professional, such as a medical doctor or a nurse, at least once every 12 months for a checkup, can help people improve their health, or not?

Rationale

Preventive health screenings and yearly primary care consultations have been found to significantly increase life expectancy, particularly among the 30- to 75-year-old age group, but recommendations vary greatly depending on the disease, level of resources in the community and gender.

The framing of this item specifically addresses people’s knowledge and attitudes (“do you think”) toward preventive care and provides a specific time frame (“at least once every 12 months”) to aid with recall.

The question is also framed neutrally and the final clause “or not” allows respondents to answer based on personal opinions, reducing the chance of social desirability bias as much as possible. This framing may appear odd in English, but Gallup has found it to be highly successful in reducing acquiescence bias, especially in other languages.

Implications

- Inform where preventive care is not occurring systematically.
- Earlier detection of chronic illnesses and deadly diseases helps decrease mortality rates. Many of the top risk factors leading to illness and premature death can be prevented.
- Reduce medical expense through early detection.

Experience of Preventive Care

In the past 12 months, have you talked to a healthcare professional, such as a medical doctor or nurse, about your own health?

Rationale

This item is a follow-up to the previous question about knowledge and attitudes and seeks to uncover whether respondents have taken action to seek annual preventive care (behavior or practice).

The concept of a visit to a healthcare professional is described in simple and broad terms (“have you talked to a healthcare professional [...] about your own health”) to capture unscheduled, informal consultations as well as annual health examinations. The question echoes the specific time frame used in the previous question (“the past 12 months”) to aid with recall and yield more precise responses.

The question also defines who is considered a medical professional. In some countries, a nurse may be considered “less than” a doctor and therefore their checkup and medical advice could be given less credence. Specifying who is considered a medical professional also helps eliminate any informal sources of health advice, such as local healers or family members credited with health knowledge, especially in countries with less access to medical infrastructure.

Implications

- Highlight potential differences and service inequities between populations.
- Educate the public regarding personal care behaviors.

*To the best of your knowledge, were you tested for any of the following in the past 12 months?
[High blood pressure, cancer, diabetes, STDs/STIs]?*

Rationale

The framing of this question lets us survey participants on four different issues using a common stem, which makes the overall time involved in asking the questions shorter and allows respondents to move through the battery quickly, reducing the overall cognitive burden of the survey.

The item is being framed as a yes/no question to simplify the process of answering.

In addition, the inclusion of STDs/STIs — a highly sensitive topic — occurs at the end of the list to allow respondents to gain confidence in answering questions about less sensitive diseases before disclosing their answer.

The question provides a specific time frame to aid with recall and precision in the responses.

The diseases themselves are described in the simplest terms possible and translated into local languages using the commonly used terminology.

Following the question about discussing health with a healthcare professional, the four types of specific screenings were chosen because they include the most frequent, fastest growing and/or most damaging diseases for women:

- Heart disease is the leading cause of death in both men and women (CDC, 2020b).
- Cancer is the second-leading cause of death globally and was responsible for an estimated 10 million deaths in 2020. Globally, about one in six deaths is due to cancer (CDC, 2020a; WHO, 2021c).
- Obesity and diabetes-related diseases are a growing concern around the world and are associated with heart disease, as well as increased incidence of certain cancers (CDC, 2021b; WHO, 2021b, 2021g).
- STDs/STIs have an outsized, potentially devastating impact on women’s reproductive health and fertility (compared with men) (CDC, 2021a).

Implications

- Earlier detection of chronic illnesses and deadly diseases helps decrease mortality rates.
- Underscores the importance of understanding the role of annual screenings in improving health and curtailing expenses.
- The COVID-19 pandemic may have an amplifier effect on already worrying trends:
 - Between 2000 and 2016, there was a 5% increase in premature mortality from diabetes (WHO, 2021g).
 - Diabetes is one of the fastest-growing health challenges of the 21st century, with the number of adults living with diabetes having more than tripled over the past 20 years (IDF, 2019).

Maternal Care

Do you think most pregnant women in the city or area where you live receive high-quality healthcare during their pregnancies, or not?

Rationale

Perceptions of the quality of maternal care are lacking in global statistics. This item is inviting an opinion of prenatal care based on personal experience and knowledge of local institutions.

The geographical delimitation to the local vicinity (“city or area where you live”) helps respondents express an opinion more confidently since they are more likely to know about the situation locally rather than in their region or country.

By asking about “most pregnant women,” respondents are encouraged to consider a broad majority of women, regardless of their socioeconomic status and beyond their own social circle.

Implications

- Most maternal deaths are preventable with timely management by a skilled healthcare professional working in a supportive environment (WHO, 2021a).
- Every day in 2017, approximately 810 women died from preventable causes related to pregnancy and childbirth. Ninety-four percent of all maternal deaths occur in low- and lower-middle income countries (WHO, 2019).
- Maternal conditions are the top cause of mortality among girls aged 15 to 19 globally (UNICEF, 2021). Adolescent pregnancy is common and high risk for the neonate and mother.

Pregnancy

How many children do you, personally, have?

How old were you the first time you were pregnant? [Question only asked of female respondents who said they had children in the previous question.]

Rationale

A lot can be learned about a woman and her socioeconomic status through her age at her first pregnancy and her number of children. A woman's age at first pregnancy and number of children can impact her overall health, number of years of education, employability, household income, time available to manage personal health and mental health (PRB, 2011; UNFPA, 2021a; UNICEF, 2021; WHO, 2020a; World Bank, 2021).

Notably, the question about the age at first pregnancy is the only question asked only of women in the survey as part of the Hologic survey module.

The questions are extremely simple, allowing respondents to answer accurately and easily.

Implications

- Adolescent mothers (aged 10 to 19 years) face higher risks of eclampsia, puerperal endometritis and systemic infections than women aged 20 to 24 years, and babies of adolescent mothers face higher risks of low birth weight, preterm delivery and severe neonatal conditions (UNFPA, 2021a; WHO, 2020a).
- Adolescent pregnancy takes an enormous toll on a girl's education and income-earning potential and longevity. Many girls who become pregnant are pressured or forced to drop out of school. Leaving school jeopardizes a girl's future economic prospects and excludes her from other opportunities in life (UNFPA, 2021a).

Domestic Violence

Now I would like to ask you a question regarding domestic violence. Domestic violence can be physical, psychological, or involve sexual acts done to someone against their will by a person they live with.

In your opinion, is domestic violence a widespread problem in [Country], or not?

Rationale

Domestic violence has dramatic health and safety consequences for women of all socioeconomic backgrounds around the world. The belief that domestic violence is widespread and thus negatively affects health and safety could potentially lead to the deconstruction of harmful norms, such as victim-blaming, and could optimistically lead to a cultural awakening, as seen during the #MeToo movement. Cultural movements and grassroots initiatives focusing on domestic violence can be strong forces in calling for social and legislative change, putting pressure on leaders to act.

This question allows respondents to express their view on the incidence of domestic violence without having to discuss their own victimization or that of loved ones.

The item intentionally asks how "widespread" the problem is, rather than how "serious" or "important," given that the question of gravity elicited high levels of agreement due to desirability bias during cognitive testing.

Answers to this question framed at the national level may be based on personal contact with domestic abusers and survivors, but also on awareness of the national debate on the issue.

Implications

- Domestic violence against women is a major public health and education problem globally and can damage physical, mental and financial well-being (UNFPA, 2021b; UNHCR, 2021; WHO, 2021e; World Bank, 2019).
- Across their lifetime, one in three women — around 736 million — are subjected to physical or sexual violence by an intimate partner or sexual violence from a non-partner, a number that has remained largely unchanged over the past decade (WHO, 2021d, 2021f).
- The WHO lists a series of commitments countries can honor to reduce violence against women and girls:
 - sound gender transformative policies, from policies on childcare to equal pay, and laws that support gender equality
 - a strengthened health system response that ensures access to survivor-centered care and referral to other services as needed
 - school and educational interventions to challenge discriminatory attitudes and beliefs, including comprehensive sexuality education
 - a targeted investment in sustainable and effective evidence-based prevention strategies at local, national, regional and global levels
 - strengthening data collection and investing in high-quality surveys on violence against women and improving measurement of the different forms of violence experienced by women, including those who are most marginalized (WHO, 2021e)
- The provision of assistance, including in humanitarian settings and to mitigate secondary impacts of the COVID-19 pandemic, such as food insecurity and gender-based violence (National Security Directive (sec 2. (b)(iii)(B))).

Determining the Dimensions of Health and Calculating the Hologic Global Women's Health Index

Approaching analysis in Year 3 of the Index

In the third year of fielding the Index, researchers replicated the process to test for robustness in the Year 1 and Year 2 analysis and to confirm that the assumptions from Year 1 and Year 2 remained true. We found that assumptions remained valid, and the process of calculating the Index is described in more detail in the following sections.

The Year 3 analysis result shows that:

- All the selected variables used for Index creation cluster in the same way as in Year 1 and Year 2. That is, the Year 3 Index is made up of the same five sub-indexes and each sub-index includes the same elements as in Year 1 and Year 2.
- The weights associated with each dimension calculated based on Year 3 data are within 2% of their corresponding values in Year 1 and Year 2. The changes are minor, allowing one to directly compare the Index score across years.

Factor analysis

The Gallup and Hologic research team initially hypothesized that 18 items would be usable for the Index.

Items considered for inclusion in the Hologic Global Women’s Health Index

Note: Items marked in blue are from the Hologic World Poll module. All other items are Gallup historical items collected since 2005.

Topic	Question
Attitudes and behaviors regarding preventive care	<ul style="list-style-type: none"> Do you think going to a healthcare professional, such as a medical doctor or a nurse, at least once every 12 months for a checkup, can help people improve their health, or not? In the past 12 months, have you talked to a healthcare professional, such as a medical doctor or nurse, about your own health? To the best of your knowledge, were you tested for any of the following in the past 12 months? [High blood pressure, cancer, diabetes, STDs/STIs]?
Domestic violence	<ul style="list-style-type: none"> Now I would like to ask you a question regarding domestic violence. Domestic violence can be physical, psychological, or involve sexual acts done to someone against their will by a person they live with. In your opinion, is domestic violence a widespread problem in [country name], or not? Do you feel safe walking alone at night in the city or area where you live?
Access to quality maternal care and personal experience of childbirth	<ul style="list-style-type: none"> Do you think most pregnant women in the city or area where you live receive high-quality healthcare during their pregnancies, or not? How many children do you, personally, have? How old were you the first time you were pregnant?
General quality healthcare access	<ul style="list-style-type: none"> In the city or area where you live, are you satisfied or dissatisfied with the availability of quality healthcare?
Food and shelter accessibility	<ul style="list-style-type: none"> 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? Have there been times in the past 12 months when you did not have enough money to provide adequate shelter or housing for you and your family?
Overall health (quality of life, daily pain levels)	<ul style="list-style-type: none"> Do you have any health problems that prevent you from doing any of the things people your age normally can do? Did you experience the following feelings during a lot of the day yesterday? How about physical pain?
Emotional well-being issues	<ul style="list-style-type: none"> Did you experience the following feelings during a lot of the day yesterday? How about worry? Did you experience the following feelings during a lot of the day yesterday? How about sadness? Did you experience the following feelings during a lot of the day yesterday? How about stress? Did you experience the following feelings during a lot of the day yesterday? How about anger? Life Evaluation Index (Thriving, Struggling, Suffering)

In preparation for running a factor analysis of the listed items, the following two tests were used to check correlation and sampling adequacy:

- **Bartlett Test:** If the p-value is less than 0.05, this shows the significance of the test and indicates a factor analysis may be useful for our dataset.
- **Kaiser-Meyer-Olkin Test:** If the test score is above 0.8, it indicates the sample is adequate for factor analysis.

Tetrachoric correlation (instead of Pearson's correlation) was used to measure the association between variables since all variables are binary.

- After testing, the following variables were dropped:
 - Two items — the questions about the number of children and age of first pregnancy — were excluded due to scaling and issues with directionality.
 - The question regarding whether going to a healthcare professional improves health was excluded due to low variance.

Researchers then used factor analysis to determine which factors emerged and which items were most highly loaded.

- Factor analysis is limited to female respondents only since we are trying to predict the health and safety status of women, rather than the general population. Female cases without missing values in the selected items were included in the analysis.
- Before running factor analysis, many of the variables were recoded.
- The question regarding domestic violence and the Life Evaluation Index were dropped due to not being highly loaded (with factor loadings above 0.4) on any factor.

A statistically good factor analysis solution was achieved by setting the number of factors to five and using “Varimax” rotation (orthogonal). The eigenvalues of all five factors are greater than one. The eigenvalue is used to measure the amount of variance of variables that a factor explains. The logic is that only factors that explain at least the same amount of variance as a single variable are worth keeping.

- **Factor 1 is about preventive care**, including having been tested for high blood pressure, cancer, diabetes and STDs/STIs.
- **Factor 2 is about emotional issues**, including experiencing worry, sadness, stress and anger for a lot of the day prior (all items reverse scored).
- **Factor 3 is about health and safety**, including receiving high-quality care during pregnancy, satisfaction with quality healthcare in general and feeling safe walking alone at night.
- **Factor 4 is about basic needs**, including having trouble affording food and shelter in the past 12 months (all items reverse scored).
- **Factor 5 is about individual health**, including having health problems and experiencing pain for a lot of the day prior (all items reverse scored).

The extracted five factors explain 61.9% of the total variance of the selected items for Year 3.

To achieve a valid score, a respondent needs to answer “Yes” or “No” to at least three of the four items for factor 1, three of the four items for factor 2, two of the three items for factor 3, two of the three items for factor 4 and two of the two items for factor 5.

3 Missing data

Given the global nature of the Gallup World Poll, all national surveys are subject to the relevant government approvals and restrictions.

The following exclusions apply:

- **Yemen:** Values are missing for the questions regarding domestic violence and testing for STDs/STIs.
- **Iran:** Values are missing for the question regarding testing for STDs/STIs.
- **Jordan:** Values are missing for the question regarding testing for STDs/STIs.
- **Pakistan:** Values are missing for the question regarding testing for STDs/STIs.
- **Saudi Arabia:** Values are missing for the question regarding testing for STDs/STIs.
- **Tanzania:** Values are missing for the question regarding having experienced stress yesterday.
- **Ukraine:** Values are missing for the questions regarding quality healthcare and feeling safe walking alone.

4 Rounding

The numbers in the Hologic Global Women's Health Index use many observations and are calculated first to the infinite decimal place. Then, to display the scores, they are rounded to the nearest whole number.

- To calculate a country's rank, Hologic and Gallup researchers use the full score with multiple digits to avoid ties.
 - If two countries have a score of 56 but one is 56.1 and one is 56.4, the country with 56.4 has a higher rank.
- However, to calculate change the standard way, scores are rounded first, then subtracted.
 - If a country has a rounded final score of 54 in Year 2 and a score of 52 in Year 3, the change will be 54-52, or a decrease of 2.

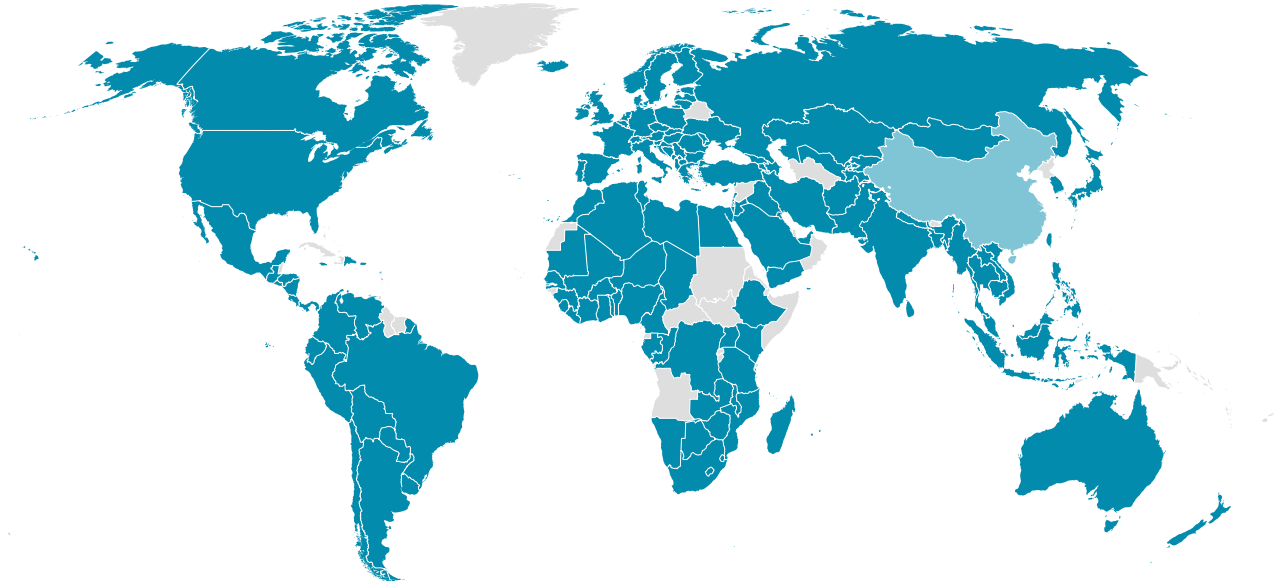
Differences in Countries Surveyed in Year 3

In Year 3, 22 countries and territories were surveyed that were not surveyed in all three years. For a comparison to the baseline countries surveyed in Year 1, please see the Year 2 report.

Year Wave	Global Coverage	Number of Countries	New Countries and Territories
Year 2	94%	122	
Year 3	97%*	143	Azerbaijan
			Libya
			Botswana
			Luxembourg
			Chad
			Madagascar
			Comoros
			Mauritania
			Democratic Republic of the Congo
			Montenegro
			Eswatini
			Niger
Ethiopia			
Northern Cyprus			
Guatemala			
Palestinian Territories			
Kuwait			
Puerto Rico			
Lesotho			
The Gambia			
Liberia			
Yemen			

*Includes data collected in China in Year 2.

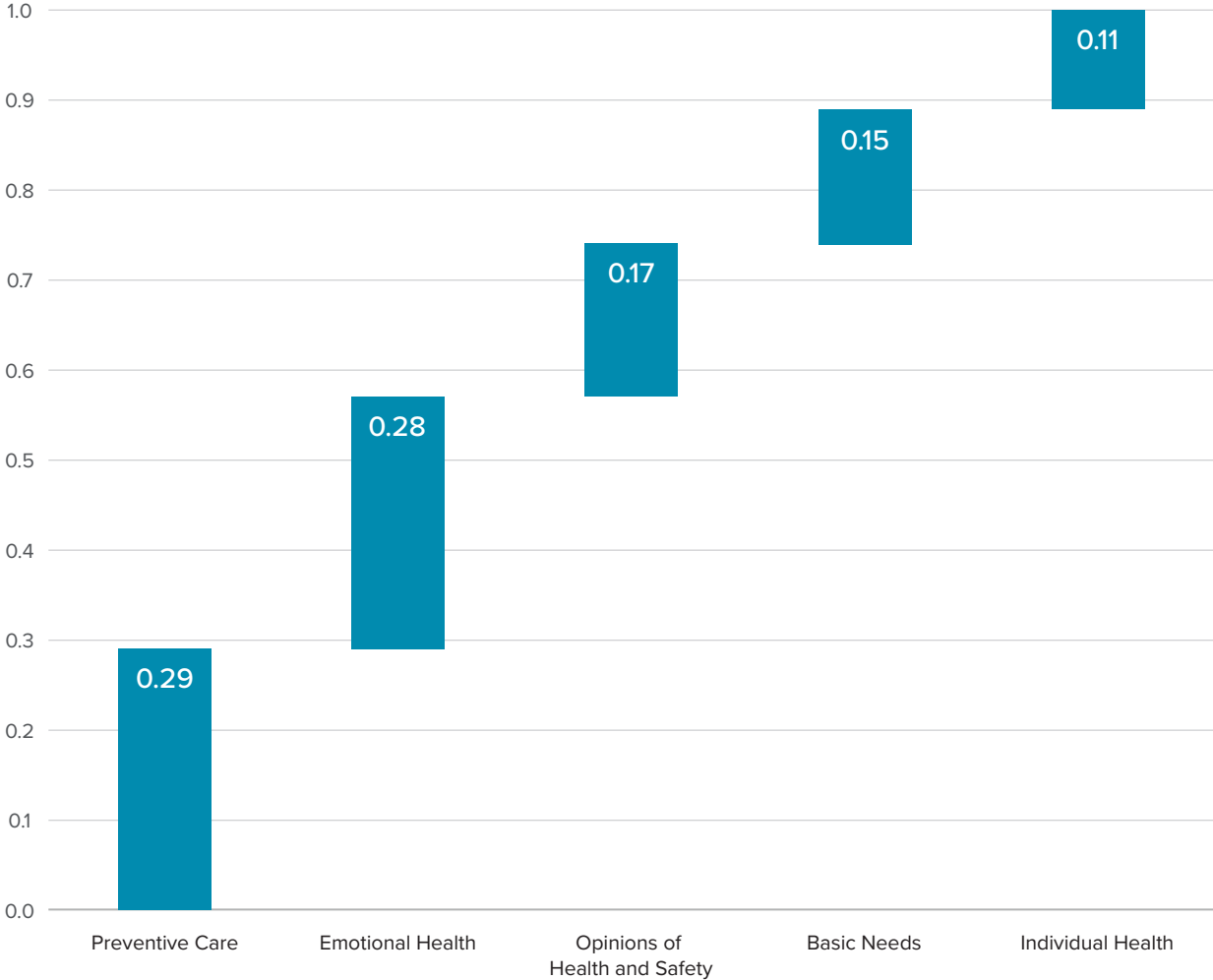
Countries included in the Year 3 Hologic Global Women’s Health Index



5 Weighting and aggregation approach

Each sub-index score is calculated for each factor by taking the simple average of its corresponding recoded items. The Hologic Global Women’s Health Index score is calculated by taking a weighted sum of the five sub-index scores, with weights proportional to each factor’s eigenvalue (amount of variance of variables that a factor explains). The weights are shown in Figure 1.

FIGURE 1
Index Weights Based on Eigenvalues



6 Data normalization

Variables were recoded for inclusion in the Hologic Global Women's Health Index as follows:

For a list of variable codes, please see Section 9: Survey module.

- TEST_FOR_HBP: Set to 1 if H4A. = 1, 0 if H4A. = 2 OR H3. = 2, NA for any other value.
- TEST_FOR_CANCER: Set to 1 if H4B. = 1, 0 if H4B. = 2 OR H3. = 2, NA for any other value.
- TEST_FOR_DIABETES: Set to 1 if H4C. = 1, 0 if H4C. = 2 OR H3. = 2, NA for any other value.
- TEST_FOR_STD: Set to 1 if H4D. = 1, 0 if H4D. = 2 OR H3. = 2, NA for any other value.

- WORRY_REVERSE: Set to 1 if WP69 = 2, 0 if WP69 = 1, NA for any other value.
- SADNESS_REVERSE: Set to 1 if WP70 = 2, 0 if WP70 = 1, NA for any other value.
- STRESS_REVERSE: Set to 1 if WP71 = 2, 0 if WP71 = 1, NA for any other value.
- ANGER_REVERSE: Set to 1 if WP74 = 2, 0 if WP74 = 1, NA for any other value.

- PREGNANT_HEALTHCARE: Set to 1 if H2. = 1, 0 if H2. = 2, NA for any other value.
- QUALITY_HEALTHCARE: Set to 1 if WP97 = 1, 0 if WP97 = 2, NA for any other value.
- SAFE_NIGHT_WALKING: Set to 1 if WP113 = 1, 0 if WP113 = 2, NA for any other value.

- NO_FOOD_REVERSE: Set to 1 if WP40 = 2, 0 if WP40 = 1, NA for any other value.
- NO_SHELTER_REVERSE: Set to 1 if WP43 = 2, 0 if WP43 = 1, NA for any other value.

- HEALTH_PROBLEM_REVERSE: Set to 1 if WP23 = 2, 0 if WP23 = 1, NA for any other value.
- PHYSICAL_PAIN_REVERSE: Set to 1 if WP68 = 2, 0 if WP68 = 1, NA for any other value.

- DOMESTIC_VIOLENCE: Set to 1 if H7. = 1, 0 if H7. = 2, NA for any other value.

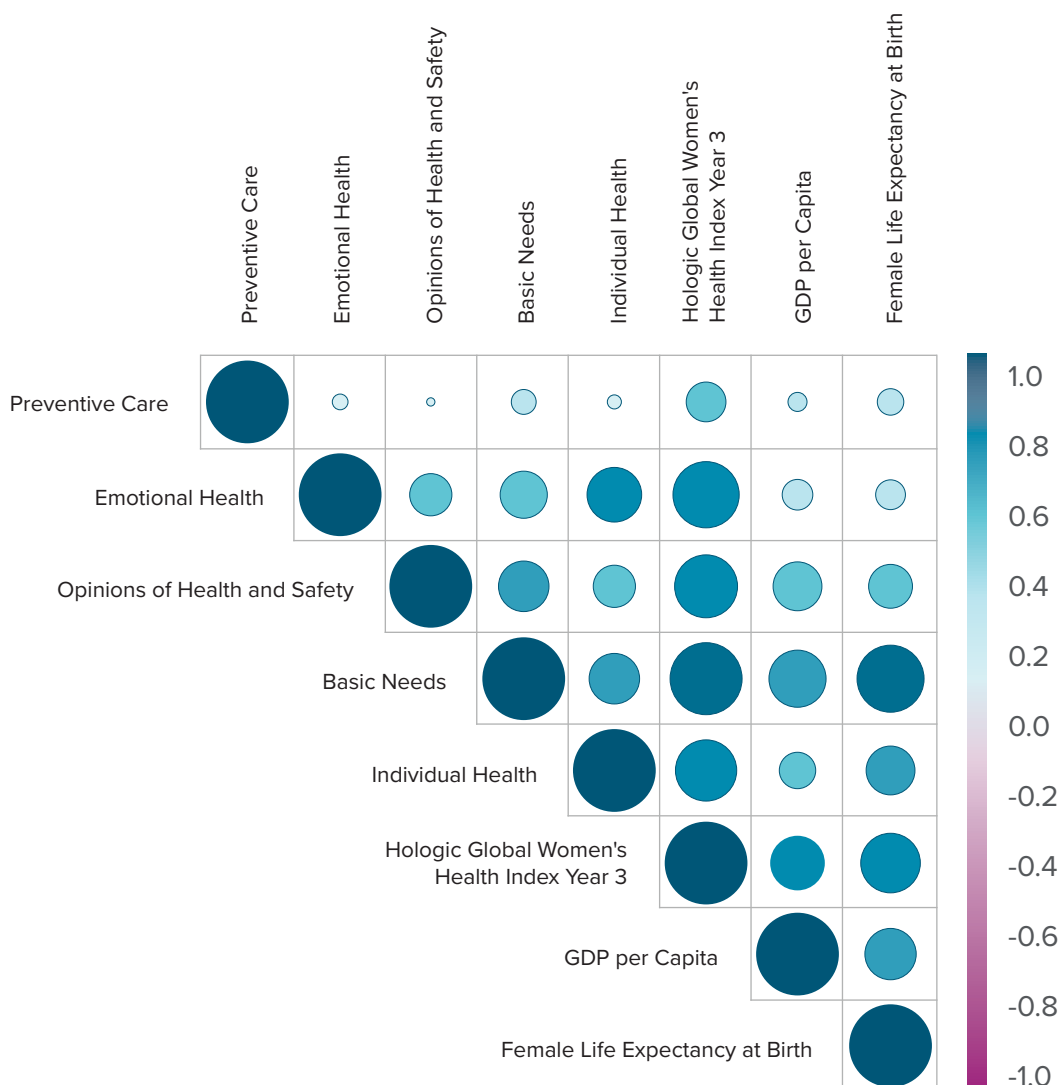
7 Multivariate analysis

To understand the interactions of the individual dimensions and their relationship to health outcomes, the Gallup and Hologic research team ran correlations among the variables and regression analysis using life expectancy as the dependent variable.

Correlations reveal low collinearity between the individual dimensions. In addition, all the dimensions and GDP 2019 are relatively highly correlated with the life expectancy of women.

The regression analysis reveals that the five factors of the Hologic Global Women’s Health Index explain approximately 70% of the female life expectancy at birth at the country level. Note: Gallup identified an error in the regression analysis in Year 1 and Year 2. Previously, Gallup found that these factors accounted for more than 80% of the variance in why some women live longer than others. After further testing and rigorous analysis, Gallup still found extremely strong relationships in all three years of data collection, including the present study.

FIGURE 2
Correlation Table



Regression analysis

Call: lm(formula = Life_expectancy_at_birth_years_Female ~ Preventive Care + Emotional Health + Opinions on Health and Safety + Basic Needs + Individual Health, data = df_sub, weights = df_sub\$weight)

Dependent variable: Female life expectancy at birth

Regression Output for Female Life Expectancy at Birth

Variable	Std. Error	Coefficient
Preventive Care	(4.385)	14.695**
Emotional Health	(5.159)	-14.997**
Opinions of Health and Safety	(2.493)	-1.555
Basic Needs	(2.349)	23.790***
Individual Health	(4.444)	12.108**
Constant	(2.251)	60.225***

Observations = 136

R2 = 0.6983 Adjusted R2 = 0.6867

Residual Std. Error = 14670 (df = 130) F Statistic = 60.17*** (df = 5; 130)

Note: *p<0.1; **p<0.05; ***p<0.01

8 Relationship with other measures

Adding to the relationships that the Hologic Global Women's Health Index has with a woman's life expectancy at birth, as well as a country's GDP per capita, researchers tested the following Sustainable Development Goals (SDGs):

- **SDG 1.1**
 - population pushed below a relative poverty line by household health expenditures (60% of median daily per capita consumption or income) (%)
- **SDG 2.2.3**
 - prevalence of anemia in pregnant women (aged 15 to 49) (%)
- **SDG 3.1.1**
 - maternal mortality ratio (MMR) (per 100,000 live births)
- **SDG 3.1.2**
 - births attended by skilled health personnel (%)
- **SDG 3.8.1**
 - universal health service coverage (UHC)
- **SDG 5.2.1**
 - proportion of ever-partnered women and girls aged 15 to 49 years subjected to physical and/or sexual violence by a current or former intimate partner in the previous 12 months
- **10.4.1**
 - labor share of GDP

FIGURE 3

Pearson Correlation Coefficients

- Dark Magenta = Strong Negative Relationship (-.7 to -.1)
- Light Magenta = Negative Relationship (-.3 to -.7)
- Light Teal = Positive Relationship (.3 to .7)
- Dark Teal = Strong Positive Relationship (.7 to 1)

	Predicted Relationship With Women's Health	HGWHI Year 3	Preventive Care	Emotional Health	Opinions of Health and Safety	Basic Needs	Individual Health	Healthcare Professional (12 month)	Domestic Violence	Access to High-Quality Pregnancy Healthcare
Female Life Expectancy at Birth	+ High = Good	0.72	0.32	0.36	0.53	0.81	0.59	0.59	0.05	0.33
SDG 1.1 (poverty from health)	- High = Bad	-0.19	-0.21	-0.22	-0.12	-0.03	-0.18	-0.20	0.02	-0.24
SDG 2.2.3 (anemia in pregnancy)	-	-0.68	-0.50	-0.35	-0.39	-0.71	-0.57	-0.62	-0.22	-0.23
SDG 3.1.1 (MMR)	-	-0.62	-0.33	-0.38	-0.42	-0.61	-0.52	-0.45	-0.09	-0.25
SDG 3.1.2 (skilled health at birth)	+	0.55	0.39	0.29	0.31	0.59	0.41	0.46	0.15	0.15
SDG 3.8.1 (UHC)	+	0.78	0.49	0.43	0.50	0.79	0.63	0.68	0.13	0.33
SDG 5.2.1 (domestic violence past 12 months)	-	-0.67	-0.27	-0.43	-0.52	-0.70	-0.44	-0.49	-0.08	-0.32
SDG 10.4.1 (labor share of GDP)	+	0.42	0.41	0.16	0.19	0.47	0.25	0.50	0.32	0.16

Survey module

H1 Do you think going to a healthcare professional, such as a medical doctor or a nurse, at least once every 12 months for a checkup, can help people improve their health, or not?

Yes	No	(DK)	(Refused)
1	2	8	9

H2 Do you think most pregnant women in the city or area where you live receive high-quality healthcare during their pregnancies, or not?

Yes	No	(DK)	(Refused)
1	2	8	9

H3 In the past 12 months, have you talked to a healthcare professional, such as a medical doctor or nurse, about your own health?

Yes	No	(DK)	(Refused)
1	2	8	9

(If code 1 in H3., Continue;
Otherwise, Skip to H5.)

H4 To the best of your knowledge, were you tested for any of the following in the past 12 months? (Read items)

	Yes	No	(DK)	(Refused)
H4A. High blood pressure	1	2	8	9
H4B. Cancer	1	2	8	9
H4C. Diabetes	1	2	8	9
H4D. Sexually transmitted diseases or infections	1	2	8	9

H5 How many children do you, personally, have? (Interviewer: Respondent should include all children even if they are now adults or have died.)

	Circle One Response
Write in:	_____
None	00
97+	97
(DK)	98
(Refused)	99

(If [respondent is a woman and has children], Continue;
Otherwise, Skip to Read before H7.)

H6 How old were you the first time you were pregnant? (Open-ended and code actual age)

	Circle One Response
Write in: _____	
96+	96
(Never pregnant/has only adopted children or stepchildren)	97
(DK)	98
(Refused)	99

Now I would like to ask you a question regarding domestic violence. Domestic violence can be physical, psychological, or involve sexual acts done to someone against their will by a person they live with.

H7 In your opinion, is domestic violence a widespread problem in [Country], or not?

Yes	No	(DK)	(Refused)
1	2	8	9

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Hologic Global Women's Health Index: Methodology and Data Analysis

Introduction

The Hologic Global Women's Health Index is the world's most comprehensive, globally comparative survey about women's health. This appendix provides key methodological details related to the Year 1-Year 3 surveys and further information about the data analysis presented in this report.

Report	Data Collection Year
Year 1	2020
Year 2	2021
Year 3	2022

Methodology

The Hologic Global Women's Health Index was included as a module within the Gallup World Poll beginning 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.

Data collection in 2020

2020 was far from a typical year. The unprecedented challenges presented by the COVID-19 pandemic forced Gallup to pause its global data collection in March 2020 to thoroughly assess risk and prepare contingency plans for collecting data. By May, the continued prevalence of COVID-19 made it clear 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 Year 1 Hologic Global Women’s Health Index survey was conducted primarily by phone (via computer-assisted telephone interviewing, or 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).

Changing modes in 2021

The Gallup World Poll returned to face-to-face interviewing in many countries in 2021 (see dataset details). The change in mode is reflected in the design effect — thus, larger percentage differences are required for significant change.

Data collection in 2022

The Gallup World Poll returned to face-to-face interviewing in most countries where respondents had been interviewed this way prior to 2020 (see dataset details). The exceptions were a handful of Eastern European countries, where respondents continued to be interviewed by telephone.

Because the Hologic Global Women’s Health Index was not fielded in China in 2022, the Year 3 report uses the most recent data from 2021. The data for China are weighted to 2022 population estimates.

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 Hologic Global Women’s Health Index was originally developed in English. From this starting point, Gallup translators produced several major-language questionnaires in French, Spanish, Portuguese, Russian and Arabic (using one of the two translation methods described below, as deemed appropriate by the Gallup World Poll Regional Directors).

Then, local language translations were performed from the major-language versions. For example, the Russian major-language questionnaire was created first (translation from English to Russian), then 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 the Hologic Global Women's Health Index.

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 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, 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 and selection process works

Gallup uses telephone surveys in countries where telephone coverage represents at least 80% of the population or is the customary survey methodology. In countries where telephone interviewing is employed, Gallup uses RDD or a nationally representative list of phone numbers. Telephone methodology is typical in such areas as the U.S., Canada, Western Europe, Japan and Australia. Gallup purchases telephone samples from various sample providers located in each region, including Sample Answers and Sample Solutions.

In the developing world, including much of Latin America, the former Soviet Union countries, nearly all of Asia, the Middle East and Africa, Gallup uses an area frame design for face-to-face interviewing in randomly selected households.

Face-to-face interviews are approximately one hour, while telephone interviews are about 30 minutes.

With some exceptions, all samples are probability based and nationally representative of the resident population aged 15 and older. The coverage area is the entire country including rural areas, and the sampling frame represents the entire civilian, noninstitutionalized adult population of the country. Exceptions include areas where the safety of the interviewing staff is threatened and scarcely populated islands in some countries. Sampling procedures include the following stages:

- **1) Selecting primary sampling units (PSUs):** In countries where Gallup conducts face-to-face surveys, the first stage of sampling is the identification of PSUs, consisting of clusters of households. PSUs are stratified by population size and/or geography and clustering is achieved through one or more stages of sampling. Where population information is available, sample selection is based on probabilities proportional to population size; otherwise, Gallup uses simple random sampling. In countries where telephone interviewing is employed, Gallup uses RDD or a nationally representative list of phone numbers. In select countries where cellphone penetration is high, Gallup uses a dual sampling frame. Gallup makes at least three attempts to reach a person in each household.
- **2) Selecting households:** Gallup uses random-route procedures to select sampled households. Unless an outright refusal occurs, interviewers make up to three attempts to survey the sampled household. To increase the probability of contact and completion, interviewers make attempts at different times of the day and, when possible, on different days. If the interviewer cannot obtain an interview at the initial sampled household, they use a simple substitution method.
- **3) Selecting respondents:** In face-to-face and telephone methodologies, random respondent selection is achieved by using either the latest birthday or the Kish grid method. In a few Middle Eastern and Asian countries, gender-matched interviewing is required, and probability sampling with quotas is implemented during the final stage of selection. Gallup implements quality control procedures to validate the selection of correct samples and that the interviewer selects the correct person in each household.

Response Rates

As is the case with Gallup World Poll surveys more generally, response rates for the Hologic Global Women's Health Index vary considerably across countries. In general, response rates are lower in countries where interviewing is conducted by telephone than in countries where interviewing is conducted in person. However, 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 selection than someone who lives alone, holding everything else equal. The data weighting process seeks to address this type of imbalance.

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 Table 1). The design effect calculation reflects the influence of weighting on sampling variance compared to a simple random sample of the same size.

Sampling Error and 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:

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

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.

Table 1 shows the size of the MOE 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.

Table 1 shows estimated precision levels for different values of P and sample sizes under the assumption of simple random sampling.

TABLE 1

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 above table 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 size of 1,000.

Meaningful change

Researchers developed a standardized definition of meaningful change in a country’s score from one year to the next — a threshold of +/- 5 points. This definition allows researchers to establish best practice when comparing country scores from year to year, while considering a country’s sample size and margin of error estimates (defined in Table 1).

A 5-point change is the smallest standard number where researchers can be certain that change cannot be explained by sampling random fluctuations or by measurement error, no matter the percentage or the country’s particular design effect. This number is defined as a meaningful change because, while complex survey sampling methods to test for significant change were not individually applied (Cohen, 1988), this is the upper limit of change where researchers can be certain there is a statistically significant difference between the two groups.

Researchers seek to avoid confusion by setting this threshold, so in all instances, a change of +/- 5 or more points is highlighted throughout the report.

Hologic Global Women's Health Index Country Dataset Details

TABLE 2

Country Dataset Details

Gallup Worldwide Research Data Collected From 2022

^a The design effect calculation reflects the weights and does not incorporate the intraclass correlation coefficients. Design effect calculation: $n * (\text{sum of squared weights}) / [(\text{sum of weights}) * (\text{sum of weights})]$

^b Margin of error is calculated around a proportion at the 95% confidence level. The maximum margin of error was calculated assuming a reported percentage of 50% and takes into account the design effect. Margin of error calculation: $\sqrt{(0.25/N) * 1.96^2 * \text{DE}}$

*Handheld data collection.

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Afghanistan	17.1	Jul 20 – Aug 27, 2022	1,000	1.33	3.6	Face-to-Face (HH)*	Dari, Pashto	Gender-matched sampling was used during the final stage of selection.
2022	Albania	17.1	Sep 1 – Oct 13, 2022	1,000	1.65	4.0	Face-to-Face (HH)*	Albanian	People living in remote or difficult-to-access rural areas were excluded. The excluded areas represent approximately 2% of the population.
2022	Algeria	17.1	Sep 18 – Oct 5, 2022	821	1.44	4.1	Face-to-Face (HH)*	Arabic	Sparsely populated areas in the far South were excluded, representing approximately 10% of the population.
2022	Argentina	17.1	Jul 18 – Sep 9, 2022	1,005	1.42	3.7	Face-to-Face (HH)*	Spanish	Those living in dispersed rural population areas were excluded. This represents about 4% of the population.
2022	Armenia	17.1	Sep 8 – Oct 19, 2022	1,003	1.71	4.1	Face-to-Face (HH)*	Armenian	Settlements near territories disputed with Azerbaijan were not included for insecurity reasons. The excluded areas represent approximately 3% of the population.
2022	Australia	17.2	Sep 12 – Oct 30, 2022	1,000	1.70	4.0	Landline and Mobile Telephone	English	
2022	Austria	17.2	Sep 12 – Oct 10, 2022	1,000	1.56	3.9	Landline and Mobile Telephone	German	
2022	Azerbaijan	17.1	Oct 15, 2022 – Feb 26, 2023	1,028	1.48	3.7	Face-to-Face (HH)*	Azeri	Kelbadjaro-Lacha, Nakhichevan, East Zangezur and Nagorno-Karabakh territories not included. These areas represent approximately 18% of the total population.

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Bangladesh	17.1	Jun 29 – Sep 29, 2022	1,000	1.37	3.6	Face-to-Face (HH)*	Bengali	
2022	Belgium	17.2	Aug 30 – Sep 30, 2022	1,001	1.30	3.5	Landline and Mobile Telephone	French, Dutch	
2022	Benin	17.1	Sep 26 – Oct 9, 2022	1,000	1.89	4.3	Face-to-Face (HH)*	Bariba, Fon, French	
2022	Bolivia	17.1	Jun 25 – Aug 10, 2022	1,000	1.40	3.7	Face-to-Face (HH)*	Spanish	Some distant, small locations were excluded due to accessibility and/or security issues. The exclusions represent approximately 7% of the population.
2022	Bosnia and Herzegovina	17.1	Sep 9 – Dec 21, 2022	1,000	1.44	3.7	Face-to-Face (HH)*	Bosnian	
2022	Botswana	17.1	Sep 25 – Oct 21, 2022	1,003	1.95	4.3	Face-to-Face (HH)*	English, Setswana	Sampling units of population size less than 50 were excluded from the sampling frame. This exclusion is approximately 4% of the population of Botswana.
2022	Brazil	17.1	Jul 1 – Aug 8, 2022	1,000	1.30	3.5	Face-to-Face (HH)*	Portuguese	
2022	Bulgaria	17.1	Jun 29 – Sep 8, 2022	1,000	1.42	3.7	Face-to-Face (HH)*	Bulgarian	
2022	Cambodia	17.1	Sep 14 – Oct 15, 2022	1,000	1.50	3.8	Face-to-Face (HH)*	Khmer	Koh Kong, Stueng Treng, Otdor Meanchey and Kep provinces were excluded. These excluded areas represent approximately 3% of the population of Cambodia.
2022	Cameroon	17.1	Jun 14 – Jul 7, 2022	1,000	1.40	3.7	Face-to-Face (HH)*	French, English, Fulfulde	Some arrondissements in the East region, the North region, the Extreme North region, the Northwest region and the Southwest region were excluded due to insecurity. Neighborhoods with less than 50 households were also excluded from the sampling. The exclusions represent 32% of the total population.
2022	Canada	17.2	Aug 4 – Sep 21, 2022	1,004	1.28	3.5	Landline and Mobile Telephone	English, French	Yukon, Northwest Territories and Nunavut were excluded from the sample.

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Chad	17.1	Oct 9 – Nov 12, 2022	1,000	1.75	4.1	Face-to-Face (HH)*	French, Chadian Arabic, Ngambaye	Because of security issues and difficult terrain, seven regions were excluded from the sampling: Lac, Ouaddai, Wadi Fira, Bourkou, Ennedi, Tibesti and Salamat. In addition, the North Kanem and Bahr El Gazal North districts were excluded due to accessibility issues. Quartiers/villages with less than 50 inhabitants were also excluded from sampling. The excluded areas represent 23% of the population.
2022	Chile	17.1	Jul 13 – Sep 20, 2022	1,000	1.50	3.8	Face-to-Face (HH)*	Spanish	
2022	Colombia	17.1	Jul 14 – Aug 3, 2022	1,000	1.26	3.5	Face-to-Face (HH)*	Spanish	Ten departments and an additional 19 municipalities were excluded since they are located in areas of low population or with extreme insecurity issues. The excluded areas represent approximately 5% of the population.
2022	Comoros	17.1	Aug 3 – Sep 22, 2022	1,000	1.54	3.8	Face-to-Face (HH)*	French, Comorian	
2022	Congo	17.1	Jul 2 – Jul 23, 2022	1,000	1.88	4.2	Face-to-Face (HH)*	French, Kituba, Lingala	
2022	Congo, Democratic Republic of the	17.1	Aug 16 – Sep 17, 2022	1,000	2.03	4.4	Face-to-Face (HH)*	French, Lingala, Swahili	Parts of Province Orientale, Nord Kivu, Sud Kivu and Katanga were excluded due to insecurity. Geographic exclusions represent 19% of the population.
2022	Costa Rica	17.1	Jun 25 – Aug 17, 2022	1,000	1.32	3.6	Face-to-Face (HH)*	Spanish	
2022	Croatia	17.1	Sep 7 – Nov 15, 2022	1,002	1.77	4.1	Face-to-Face (HH)*	Croatian	
2022	Cyprus	17.2	Aug 19 – Oct 4, 2022	1,010	1.98	4.3	Landline and Mobile Telephone	Greek, English	
2022	Czech Republic	17.2	Sep 22 – Nov 9, 2022	1,007	1.45	3.7	Landline and Mobile Telephone	Czech	
2022	Denmark	17.2	Oct 19 – Nov 21, 2022	1,004	1.86	4.2	Mobile Telephone	Danish	
2022	Dominican Republic	17.1	Jun 22 – Jul 5, 2022	1,000	1.49	3.8	Face-to-Face (HH)*	Spanish	
2022	Ecuador	17.1	Jul 11 – Aug 22, 2022	1,000	1.46	3.8	Face-to-Face (HH)*	Spanish	

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Egypt	17.1	Aug 26 – Sep 8, 2022	1,001	1.40	3.7	Face-to-Face (HH)*	Arabic	Frontier governorates (Matruh, Red Sea, New Valley, North Sinai and South Sinai) were excluded, as they are remote and represent a small proportion of the population of the country. The excluded areas represent less than 2% of the total population.
2022	El Salvador	17.1	Aug 15 – Sep 24, 2022	1,000	1.81	4.2	Face-to-Face (HH)*	Spanish	
2022	Estonia	17.2	Jul 22 – Sep 21, 2022	1,002	1.57	3.9	Mobile Telephone	Estonian, Russian	
2022	Eswatini	17.1	Nov 1 – Nov 29, 2022	1,000	1.58	3.9	Face-to-Face (HH)*	Siswati, English	
2022	Ethiopia	17.1	Sep 22 – Nov 16, 2022	1,000	1.64	4.0	Face-to-Face (HH)*	Amharic, English, Oromo	Due to ongoing conflict and security issues, the Tigray, Gambella and Harari regions were excluded. The excluded areas represent approximately 7% of the total population of Ethiopia.
2022	Finland	17.2	Aug 9 – Oct 13, 2022	1,000	1.51	3.8	Mobile Telephone	Finnish	
2022	France	17.2	Oct 17 – Nov 17, 2022	1,000	1.62	3.9	Landline and Mobile Telephone	French	
2022	Gabon	17.1	Aug 12 – Aug 30, 2022	1,000	1.71	4.1	Face-to-Face (HH)*	French, Fang	
2022	Georgia	17.1	Aug 8 – Oct 31, 2022	1,000	1.36	3.6	Face-to-Face (HH)*	Georgian, Russian	South Ossetia and Abkhazia were not included for the safety of the interviewers. In addition, very remote mountainous villages or those with less than 100 inhabitants were also excluded. The excluded areas represent approximately 8% of the population.
2022	Germany	17.2	May 30 – Jun 28, 2022	1,000	2.36	4.8	Landline and Mobile Telephone	German	
2022	Ghana	17.1	Aug 5 – Aug 25, 2022	1,000	1.38	3.6	Face-to-Face (HH)*	English, Ewe, Twi, Dagbani, Hausa	Localities with less than 100 inhabitants were excluded from the sample. The excluded areas represent approximately 4% of the population.
2022	Greece	17.1	Jun 24 – Sep 17, 2022	1,000	1.38	3.6	Face-to-Face (HH)*	Greek	
2022	Guatemala	17.1	Jun 29 – Oct 17, 2022	1,000	1.47	3.8	Face-to-Face (HH)*	Spanish	

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Guinea	17.1	Sep 11 – Oct 3, 2022	1,000	1.58	3.9	Face-to-Face (HH)*	French, Malinke, Pular, Soussou	
2022	Honduras	17.1	Aug 20 – Oct 3, 2022	1,000	1.51	3.8	Face-to-Face (HH)*	Spanish	
2022	Hong Kong, S.A.R. of China	17.2	Aug 25 – Oct 30, 2022	1,005	1.18	3.4	Landline and Mobile Telephone	Chinese	
2022	Hungary	17.2	Oct 4 – Nov 7, 2022	1,000	2.00	4.4	Landline and Mobile Telephone	Hungarian	
2022	Iceland	17.2	Aug 17 – Sep 27, 2022	503	1.29	5.0	Landline and Mobile Telephone	Icelandic	
2022	India	17.1	Jul 25 – Oct 18, 2022	3,000	1.35	2.1	Face-to-Face (HH)*	Assamese, Bengali, English, Gujarati, Hindi, Kannada, Malayalam, Marathi, Odia, Punjabi, Tamil, Telugu	Excluded population living in Northeast states and remote islands, and Jammu and Kashmir. The excluded areas represent less than 10% of the population.
2022	Indonesia	17.1	Jul 27 – Aug 28, 2022	1,002	1.24	3.4	Face-to-Face (HH)*	Bahasa Indonesia	
2022	Iran	17.2	Oct 12 – Oct 21, 2022	1,007	1.39	3.6	Landline and Mobile Telephone	Farsi	
2022	Iraq	17.1	Sep 27 – Dec 2, 2022	1,046	1.42	3.6	Face-to-Face and Face-to-Face (HH)*	Arabic, Kurdish	
2022	Ireland	17.2	Sep 12 – Oct 12, 2022	1,000	2.00	4.4	Landline and Mobile Telephone	English	
2022	Israel	17.1	Aug 22 – Oct 2, 2022	1,000	1.14	3.3	Face-to-Face (HH)*	Hebrew, Arabic	The sample does not include the area of East Jerusalem. This area was included in the sample of Palestinian Territories.
2022	Italy	17.2	Sep 12 – Oct 7, 2022	1,000	2.49	4.9	Landline and Mobile Telephone	Italian	
2022	Ivory Coast	17.1	Jul 12 – Jul 29, 2022	1,000	1.82	4.2	Face-to-Face (HH)*	French, Dioula	
2022	Jamaica	17.1	Aug 30 – Oct 27, 2022	500	1.35	5.1	Face-to-Face (HH)*	English	

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Japan	17.2	Aug 27 – Nov 4, 2022	1,005	1.33	3.6	Landline and Mobile Telephone	Japanese	Landline RDD excluded 12 municipalities near the nuclear power plant in Fukushima. These areas were designated as not-to-call districts due to the devastation from the 2011 disasters. The exclusion represents less than 1% of the population of Japan.
2022	Jordan	17.1	Aug 28 – Sep 17, 2022	1,000	1.29	3.5	Face-to-Face (HH)*	Arabic	
2022	Kazakhstan	17.1	Oct 1 – Oct 27, 2022	1,000	1.56	3.9	Face-to-Face (HH)*	Russian, Kazakh	
2022	Kenya	17.1	Jun 27 – Jul 12, 2022	1,000	1.33	3.6	Face-to-Face (HH)*	English, Swahili/ Kishwahili	
2022	Kosovo	17.1	Jul 21 – Oct 18, 2022	1,000	1.58	3.9	Face-to-Face (HH)*	Albanian, Serbian	
2022	Kuwait	17.2	Oct 13 – Oct 30, 2022	1,003	1.77	4.1	Mobile Telephone	Arabic, Bengali, English, Hindi	Includes only Kuwaitis, Arab expatriates and non-Arabs who were able to complete the interview in Arabic, English, Bengali or Hindi.
2022	Kyrgyzstan	17.1	Oct 5 – Oct 28, 2022	1,000	1.62	3.9	Face-to-Face (HH)*	Kyrgyz, Russian, Uzbek	
2022	Lao People's Democratic Republic	17.1	Sep 19 – Oct 16, 2022	1,000	1.55	3.9	Face-to-Face (HH)*	Lao	Excluded Xaisomboun Province, Xayaboury Province and some communes that are unreachable and/or have security considerations. The excluded areas represent approximately 7% of the population.
2022	Latvia	17.2	Aug 9 – Oct 25, 2022	1,000	1.48	3.8	Mobile Telephone	Latvian, Russian	
2022	Lebanon	17.1	Jul 14 – Aug 18, 2022	1,000	1.28	3.5	Face-to-Face (HH)*	Arabic	Hermel, Baalbak and Bint Jbeil under the strict control of Hezbollah were excluded. The excluded areas represent approximately 10% of the population.
2022	Lesotho	17.1	Sep 10 – Dec 25, 2022	1,010	1.89	4.2	Face-to-Face (HH)*	English, Sesotho	
2022	Liberia	17.1	Aug 9 – Sep 12, 2022	1,001	1.32	3.6	Face-to-Face (HH)*	English, Pidgin English	
2022	Libya	17.2	Dec 5, 2022 – Jan 16, 2023	1,000	1.37	3.6	Mobile Telephone	Arabic	

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Lithuania	17.1	Aug 3 – Oct 16, 2022	1,000	1.24	3.4	Face-to-Face (HH)*	Lithuanian	Very small settlements (with less than 100 inhabitants) were excluded. The excluded areas represent approximately 9% of the total population.
2022	Luxembourg	17.2	Sep 12 – Oct 18, 2022	1,000	1.83	4.2	Landline and Mobile Telephone	French, German	
2022	Madagascar	17.1	Jun 16 – Jul 24, 2022	1,000	1.42	3.7	Face-to-Face (HH)*	French, Malagasy	Regions that were unsafe or unreachable were excluded from the sample. The excluded areas represent approximately 17% of the total population.
2022	Malawi	17.1	Aug 26 – Sep 6, 2022	1,000	1.26	3.5	Face-to-Face (HH)*	Chichewa, English, Tumbuka	
2022	Malaysia	17.1	Jul 21 – Sep 17, 2022	1,000	1.45	3.7	Face-to-Face (HH)*	Bahasa Malay, Chinese, English	
2022	Mali	17.1	Sep 8 – Oct 4, 2022	1,000	1.30	3.5	Face-to-Face (HH)*	French, Bambara	The regions of Gao, Kidal, Mopti and Tombouctou were excluded because of insecurity. Quartiers and villages with less than 50 inhabitants were also excluded from the sample. The excluded areas represent 23% of the total population.
2022	Malta	17.2	Jul 26 – Sep 6, 2022	1,005	1.31	3.5	Landline and Mobile Telephone	Maltese, English	
2022	Mauritania	17.1	Aug 19 – Oct 21, 2022	1,000	1.66	4.0	Face-to-Face (HH)*	French, Pulaar, Hassanya	Some communes in Hodh Ech Chargui and Hodh El Gharbi were excluded due to increasing insecurity. The excluded areas represent approximately 4% of the population.
2022	Mauritius	17.2	Aug 5 – Sep 19, 2022	1,000	1.61	3.9	Landline and Mobile Telephone	Creole, English, French	
2022	Mexico	17.1	Jul 8 – Aug 22, 2022	1,000	1.40	3.7	Face-to-Face (HH)*	Spanish	
2022	Moldova, Republic of	17.1	Aug 2 – Oct 13, 2022	1,000	1.63	4.0	Face-to-Face (HH)*	Romanian/Moldavian, Russian	Transnistria (Prednestrovie) excluded for safety of interviewers. The excluded area represents approximately 13% of the population.

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Mongolia	17.1	Jun 30 – Aug 8, 2022	1,000	1.26	3.5	Face-to-Face (HH)*	Mongolian	
2022	Montenegro	17.1	Sep 28 – Dec 11, 2022	1,000	1.43	3.7	Face-to-Face (HH)*	Montenegrin	
2022	Morocco	17.1	Jul 26 – Aug 21, 2022	1,015	1.29	3.5	Face-to-Face (HH)*	Moroccan Arabic	Excludes the Southern provinces. The excluded area represents approximately 3% of the population.
2022	Mozambique	17.1	Sep 27 – Nov 25, 2022	1,000	1.90	4.3	Face-to-Face (HH)*	Portuguese, Xichangana, Emakhuwa	Cabo Delgado Province and a small number of districts in other provinces were excluded due to insecurity. The excluded areas represent 8% of population.
2022	Myanmar	17.2	Oct 7 – Nov 4, 2022	1,000	2.56	5.0	Mobile Telephone	Myanmar, Burmese	
2022	Namibia	17.1	Sep 22 – Oct 18, 2022	1,003	1.83	4.2	Face-to-Face (HH)*	English, Oshivambo, Afrikaans	
2022	Nepal	17.1	Jul 2 – Aug 2, 2022	1,000	1.66	4.0	Face-to-Face (HH)*	Nepali	
2022	Netherlands	17.2	May 23 – Aug 27, 2022	1,009	1.42	3.7	Landline and Mobile Telephone	Dutch	
2022	New Zealand	17.2	Aug 22 – Oct 2, 2022	1,000	1.56	3.9	Landline and Mobile Telephone	English	
2022	Nicaragua	17.1	Jul 30 – Sep 15, 2022	1,000	1.66	4.0	Face-to-Face (HH)*	Spanish	
2022	Niger	17.1	Sep 22 – Oct 18, 2022	1,000	1.48	3.8	Face-to-Face (HH)*	French, Hausa, Zarma	Some communes in the Agadez region and Diffa region were excluded because of insecurity. In addition, PSUs with fewer than 25 households were also excluded. The excluded areas represent approximately 8% of the population.
2022	Nigeria	17.1	Sep 21 – Oct 16, 2022	1,000	2.50	4.9	Face-to-Face (HH)*	English, Hausa, Igbo, Pidgin English, Yoruba	The three Northeastern states of Adamawa, Borno and Yobe were excluded due to insecurity and Boko Haram insurgency. In addition, disputed areas of Taraba state were also excluded. Together, these exclusions account for roughly 8% of the total population.
2022	Northern Cyprus	17.2	Aug 12 – Sep 12, 2022	1,000	1.67	4.0	Landline and Mobile Telephone	Turkish	

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	North Macedonia	17.1	Jul 30 – Oct 30, 2022	1,000	1.37	3.6	Face-to-Face (HH)*	Macedonian, Albanian	
2022	Norway	17.2	Aug 4 – Oct 4, 2022	1,002	1.85	4.2	Mobile Telephone	Norwegian	
2022	Pakistan	17.1	Sep 30 – Nov 14, 2022	1,012	1.76	4.1	Face-to-Face (HH)*	Urdu	Did not include AJK or Gilgit-Baltistan. The excluded areas represent approximately 5% of the population. Gender-matched sampling was used during the final stage of selection.
2022	Palestinian Territories	17.1	Sep 8 – Sep 28, 2022	1,000	1.22	3.4	Face-to-Face (HH)*	Arabic	Areas with security concerns close to the Israeli borders, areas that are accessible only to special Israeli permit holders and areas with population concentrations less than 1,000 people were excluded. The excluded areas represent less than 2% of the population.
2022	Panama	17.1	Jul 13 – Sep 1, 2022	1,000	1.58	3.9	Face-to-Face (HH)*	Spanish	
2022	Paraguay	17.1	Aug 31 – Sep 27, 2022	1,000	1.34	3.6	Face-to-Face (HH)*	Spanish, Jopara	
2022	Peru	17.1	Aug 19 – Sep 18, 2022	1,000	1.29	3.5	Face-to-Face (HH)*	Spanish	
2022	Philippines	17.1	Dec 14, 2022 – Feb 7, 2023	1,000	1.41	3.7	Face-to-Face (HH)*	Filipino, Iluco, Cebuano, Hiligaynon, Waray, Bicol	
2022	Poland	17.1	Jun 27 – Sep 21, 2022	1,000	1.26	3.5	Face-to-Face (HH)*	Polish	Low population areas were excluded. The excluded areas represent approximately 5% of the population.
2022	Portugal	17.2	Jul 12 – Aug 13, 2022	1,001	1.78	4.1	Landline and Mobile Telephone	Portuguese	
2022	Puerto Rico	17.1	Aug 21 – Dec 5, 2022	500	1.61	5.6	Face-to-Face (HH)*	Spanish	
2022	Romania	17.1	Jun 16 – Aug 8, 2022	1,000	1.43	3.7	Face-to-Face (HH)*	Romanian	
2022	Russian Federation	17.1	Aug 13 – Nov 2, 2022	2,006	1.44	2.6	Face-to-Face (HH)*	Russian	People living in very remote or difficult-to-access areas were excluded. The excluded areas represent approximately 5% of the population.

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Saudi Arabia	17.2	Jul 18 – Aug 3, 2022	1,021	1.88	5.1	Landline and Mobile Telephone	Arabic, English, Hindi, Urdu	Includes Saudis, Arab expatriates and non-Arabs who were able to complete the interview in Arabic, English, Urdu or Hindi.
2022	Senegal	17.1	Oct 1 – Oct 29, 2022	1,000	1.52	3.8	Face-to-Face (HH)*	French, Wolof	The Sindian commune in Zinguichor region was excluded due to insecurity. PSUs (quartiers and villages) with household sizes less than 50 were excluded due to small population size. The excluded areas represent 18% of the population.
2022	Serbia	17.1	Aug 27 – Dec 21, 2022	1,001	1.51	3.8	Face-to-Face (HH)*	Serbian	
2022	Sierra Leone	17.1	Aug 18 – Sep 13, 2022	1,000	1.18	3.4	Face-to-Face (HH)*	English, Krio, Mende	Sampling units with less than 50 households were excluded from sampling. The excluded areas represent less than 3% of the population.
2022	Singapore	17.1	Dec 10 – Dec 28, 2022	1,028	1.68	4.0	Mobile Telephone	English, Chinese, Bahasa Malay	
2022	Slovakia	17.1	Jul 22 – Oct 23, 2022	1,001	1.38	3.6	Face-to-Face (HH)*	Hungarian, Slovak	
2022	Slovenia	17.2	Aug 16 – Oct 1, 2022	1,000	2.08	4.5	Landline and Mobile Telephone	Slovene	
2022	South Africa	17.1	Oct 12, 2022 – Jan 31, 2023	1,007	1.75	4.1	Face-to-Face (HH)*	Afrikaans, English, Sotho, Xhosa, Zulu	
2022	South Korea	17.1	Aug 8 – Sep 28, 2022	1,010	1.44	3.7	Landline and Mobile Telephone	Korean	
2022	Spain	17.2	Oct 3 – Oct 28, 2022	1,000	1.77	4.1	Landline and Mobile Telephone	Spanish	
2022	Sri Lanka	17.1	Aug 24 – Nov 26, 2022	1,000	1.51	3.8	Face-to-Face (HH)*	Sinhala, Tamil	
2022	Sweden	17.2	Aug 11 – Oct 5, 2022	1,000	1.56	3.9	Mobile Telephone	Swedish	
2022	Switzerland	17.2	Sep 12 – Oct 15, 2022	1,000	1.64	4.0	Landline and Mobile Telephone	German, French, Italian	
2022	Taiwan, Province of China	17.2	Aug 8 – Sep 8, 2022	1,000	1.62	3.9	Landline and Mobile Telephone	Chinese	
2022	Tajikistan	17.1	Nov 22 – Dec 21, 2022	1,000	1.49	3.8	Face-to-Face (HH)*	Tajik	

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Tanzania	17.1	Aug 4 – Aug 28, 2022	1,001	1.48	3.8	Face-to-Face (HH)*	English, Swahili, Kishwahili	
2022	Thailand	17.1	Aug 10 – Oct 27, 2022	1,000	1.72	4.1	Face-to-Face (HH)*	Thai	Three provinces in the South region (Pattani, Narathiwat and Yala) were excluded for security reasons; in addition, a few districts in other provinces were excluded. The excluded areas in total represent less than 4% of the population.
2022	The Gambia	17.1	Sep 10 – Oct 23, 2022	1,000	1.35	3.6	Face-to-Face (HH)*	English, Pulaar, Wolof, Malinke	
2022	Togo	17.1	Oct 11 – Oct 27, 2022	1,000	2.12	4.5	Face-to-Face (HH)*	French, Ewe	
2022	Tunisia	17.1	Aug 13 – Aug 28, 2022	1,000	1.28	3.5	Face-to-Face (HH)*	Arabic	
2022	Türkiye	17.1	Oct 13 – Dec 4, 2022	1,000	1.40	3.7	Face-to-Face (HH)*	Turkish	
2022	Uganda	17.1	Oct 19 – Oct 29, 2022	1,000	1.48	3.8	Face-to-Face (HH)*	Ateso, English, Luganda, Runyankole	Three districts in the North region were excluded for security reasons — Kotido, Moroto and Nakapiripirit. The excluded areas represent 2% or less of the population.
2022	Ukraine	17.2	Oct 3 – Oct 12, 2022	1,000	1.86	4.2	Mobile Telephone	Russian, Ukrainian	
2022	United Arab Emirates	17.2	Aug 23 – Sep 13, 2022	1,000	1.13	3.3	Mobile Telephone	Arabic, English, Hindi, Urdu	Includes only Emiratis, Arab expatriates and non-Arabs who were able to complete the interview in Arabic, English, Hindi or Urdu.
2022	United Kingdom of Great Britain and Northern Ireland	17.2	Sep 12 – Oct 10, 2022	1,000	1.85	4.2	Landline and Mobile Telephone	English	Regions outside of England, Scotland, Wales and Northern Ireland were excluded.
2022	United States of America	17.2	Oct 18 – Dec 20, 2022	1,006	1.46	3.7	Landline and Mobile Telephone	English, Spanish	
2022	Uruguay	17.1	Aug 5 – Oct 14, 2022	1,000	1.28	3.5	Face-to-Face (HH)*	Spanish	
2022	Uzbekistan	17.1	Jul 6 – Sep 8, 2022	1,000	1.46	3.7	Face-to-Face (HH)*	Uzbek, Russian	The entire Karakalpak region was excluded, which corresponds to 6% of the total population in Uzbekistan.

Data Collection Year	Country	Wave	Data Collection Date	Number of Interviews	Design Effect ^a	Margin of Error ^b	Mode of Interviewing	Languages	Exclusions (Samples are nationally representative unless noted otherwise)
2022	Venezuela	17.1	Aug 26 – Sep 15, 2022	1,000	1.46	3.7	Face-to-Face (HH)*	Spanish	The federal dependencies were excluded due to remoteness and difficulty of access. Exclusions represent less than 1% of the population.
2022	Vietnam	17.1	Jun 22 – Aug 13, 2022	1,000	1.30	3.5	Face-to-Face (HH)*	Vietnamese	
2022	Yemen	17.1	Nov 7, 2022 – Jan 9, 2023	1,000	1.81	4.2	Face-to-Face and Face-to-Face (HH)*	Arabic	Al Baydaa, Al Jawf, Mareb, Sadah, the Island of Socotra and several districts in other governorates were excluded due to their small size, remoteness or security issues. The excluded areas represent approximately 23% of the population. In addition, due to the ongoing security situation during fielding, over one-fourth of the PSUs were replaced with a similar PSU in the same province.
2022	Zambia	17.1	Sep 28 – Oct 17, 2022	1,000	1.68	4.0	Face-to-Face (HH)*	Bemba, English, Lozi, Nyanja, Tonga	
2022	Zimbabwe	17.1	Aug 20 – Sep 25, 2022	1,000	1.61	3.9	Face-to-Face (HH)*	English, Shona, Ndebele	

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 attitudes toward science and health 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

The Index was fielded in 116 countries and territories in Year 1, 122 countries and territories in Year 2, and 143 countries and territories in Year 3. The survey 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 more than 140 different countries and territories. The major types of country groupings used in this report are by country income breakdowns described below.

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, in Year 1, China had the largest population of the 116 countries included in the Hologic Global Women’s Health Index. China’s aged 15 and older population represented 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 the report, respondents from China were given a greater weight — corresponding to their share of the population — in determining the final calculation.

Because data for the Hologic Global Women’s Health Index were not collected in China in 2022, data collected in 2021 were used in Year 3 report calculations. The 2021 data were weighted to the 2022 population estimates for China.

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 Hologic Global Women’s Health Index examined these characteristics using standardized definitions of income 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:

The World Bank updates its classifications annually on July 1 based on the GNI per capita in current USD of the previous year.

In 2020 these categories were:

- **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

In 2021 these categories were:

- **Low income:** GNI per capita of \$1,035 or less (in 2019)
- **Lower-middle income:** GNI per capita of \$1,046 to \$4,095
- **Upper-middle income:** GNI per capita of \$4,096 to \$12,695
- **High income:** GNI per capita above \$12,695

In 2022 these categories were:

- **Low income:** GNI per capita of \$1,085 or less (in 2021)
- **Lower-middle income:** GNI per capita of \$1,086 to \$4,255
- **Upper-middle income:** GNI per capita of \$4,256 to \$13,205
- **High income:** GNI per capita above \$13,205

Note: The World Bank does not classify Venezuela in any of the categories. When the country averages are presented at their country income level breaks, Venezuela is not included.

References in Appendix 2

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Our purpose — to enable healthier lives everywhere, every day — is driven by a **passion** to become global champions for women’s health.

We succeed by fulfilling **our promise** to bring *The Science of Sure*[®] alive through product quality, clinical differentiation, customer relationships and our team’s talent and engagement.

Hologic intends to conduct the Hologic Global Women’s Health Index in partnership with Gallup for years into the future.



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