McKinsey Health Institute

Highlights of 2023

Advancing our mission to add years to life and life to years

Compendium
December 2023

Highlights of 2023 is published by the leaders of the McKinsey Health Institute.

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The secret to great health? Escaping the healthcare matrix

by Lars Hartenstein and Tom Latkovic

The blueprint to achieve a lifetime of great health is increasingly clear and within our control. But unlocking it requires challenging the orthodoxies currently guiding individuals and institutions.

Each day, millions of well-intended healthcare professionals, scientists, and public health officials work diligently to improve our health.[1] Their work has had a profoundly positive impact on global health over the past 50 years and deserves our admiration.

At the same time, scrutinizing our mindsets and behaviors against the best-available evidence reveals that the priorities, strategies, and budgets for individuals and of governments, schools, businesses, social institutions, healthcare providers, and employers are, at least implicitly, based on a myriad of half-truths and outdated ideas.

To borrow the metaphor from the 1999 eponymous movie classic,[2] we have all been living in a "matrix" for decades with respect to our health. Life inside the healthcare matrix has its benefits but is incomplete and self-limiting. Once we escape from this matrix, we will realize the following:

1. The suffering we endure to achieve longevity is unacceptable and unnecessary.
2. Mental, social, and spiritual health are as important as physical health and are deeply interconnected.
3. Health is mostly about our ability to function, not just about disease and death.
4. Health exists on a spectrum: we can't achieve optimal health if we don't define, measure, or strive for it.
5. *Most* drivers of health sit *outside* conventional healthcare systems and are *modifiable*.
6. Achieving great health is as much about what we pursue as what we avoid.
7. People are more than patients; they deserve to be empowered with greater health literacy.
8. History suggests that the societal adaptations required to improve health are feasible; every person and institution on Earth has a role to play.

The arguments in this article are globally relevant, although we acknowledge that, in some contexts, the lack of physical or economic security may severely limit the positives and potential of other drivers of health.

[1] Through their own work in the health sector over many years, the authors consider themselves affiliated to this community.
[2] *The Matrix* is a US–Australian science fiction movie from 1999 that deals with alternative worlds individuals need to choose between. The world inside the matrix is not unpleasant: it's relatively safe, internally consistent, but obstructs the insights into and path toward a potentially better authentic life. The world outside the matrix holds the promise of a more authentic, better life, but it is fundamentally risky, as it requires exploring uncharted territory. The authors are fans of the movie and dissociate themselves from its appropriation by political extremists and conspiracy theorists.

1. The suffering we endure to achieve longevity is unacceptable and unnecessary

Do you accept that you'll probably spend 20 to 30 years in mixed (at best) health and about a decade in awful health—where you can't remember your children, use the bathroom independently, have sex, walk around the block, or use all five senses?

Children born today can hope to live 20 years longer than their grandparents born in the 1960s.[3] The number of centenarians has increased nearly 30 times in the same time frame and is becoming a global phenomenon in many middle- and high-income countries.[4] As such, these are terrific developments.

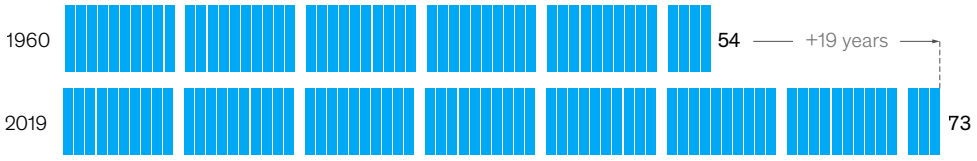
But the cost of increased life expectancy has been high. For every extra year of life we have added to our life span, half of that may be in moderate or poor health. This ratio has been roughly constant for decades (Exhibit 1).

Up to two-thirds of people experience cognitive impairment around the age of 70.[5] Sixty-nine percent of people will spend an average of three years using long-term care[6]; 770 million people experience chronic pain,[7] 300 million people are incontinent,[8] 19 million US residents not in a hospital find it difficult to walk a mile,[9] 33 percent of men and 45 percent of women experience sexual dysfunction,[10] 548 million experience symptoms of

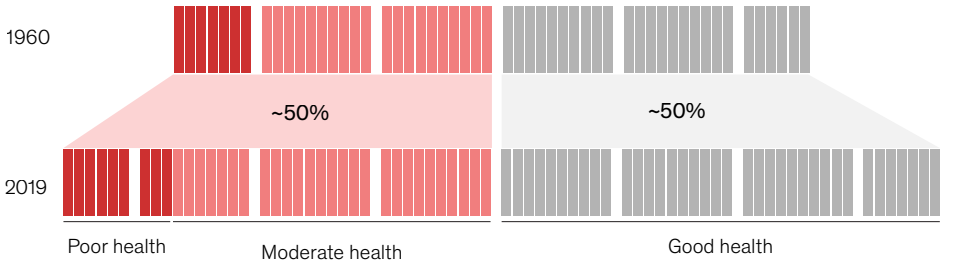
Exhibit 1

People are living longer, yet spend more years in moderate or poor health.

Average global life expectancy, years



Global health years as % of life expectancy



Source: Institute for Health Metrics and Evaluation; World Bank; McKinsey analysis

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[3] "Life expectancy at birth, total (years) database," World Bank Data, accessed December 13, 2021; "Global burden of disease study 2019, demographics 1950–2019," Institute for Health Metrics and Evaluation, accessed December 13, 2021.
[4] Katharina Buchholz, "Is 100 the new 80?: Centenarians are becoming more common," Statista, February 5, 2021.
[5] Jo Mhairi Hale et al., "Cognitive impairment in the U.S.: Lifetime risk, age at onset, and years impaired," *SSM Population Health*, 2020, Volume 11.
[6] "How much care will you need?," LongTermCare.gov, February 18, 2020.
[7] Laura Smith, "Chronic pain statistics," The Good Body, November 18, 2022.
[8] Samantha Hall, "What percentage of the population are affected by incontinence?," Incontinence UK, February 7, 2019.
[9] Lisa I. Iezzoni, "Mobility difficulties are not only a problem of old age," *Journal of General Internal Medicine*, 2001, Volume 16, Number 4.
[10] Peer Briken, "Estimating the prevalence of sexual dysfunction using the new ICD-11 guidelines," *Deutsches Ärzteblatt International*, 2020, Volume 117, Number 39.

anxiety or depression,[11] and 33 percent of people worldwide feel lonely.[12]

Inside the healthcare matrix, we have two primary responses to this reality. Some conclude that too many people live too long and have suggested reducing resources invested in older adults.[13] Most implicitly accept that living decades in poor health is lamentable but is an inevitable consequence of having a long life.

Outside the matrix, we strongly reject both responses. We conclude that the best response is harnessing individual and collective aspirations to fight for strong health until as close to death as possible. As outlined in the McKinsey Health Institute (MHI) report *Adding years to life and life to years*, there is a large body of evidence demonstrating that strong health over an extended period of life is possible. We observe it in select individuals, populations, and societies. It is possible to "square the curve" of health. Our analysis suggests it's possible to add six years of higher-quality life to every person on the planet over the next decade. That's 45 billion years in total.

2. Mental, social, and spiritual health are as important as physical health and are deeply interconnected

How important is your mental, social, and spiritual health to you? Do you observe linkages between your own mental, physical, social, and spiritual health?

Inside the matrix, people and systems focus almost entirely on physical health. In 2020, less than 2 percent of physicians and nurses worldwide were trained in managing mental health problems.[14] More than 90 percent of all healthcare expenditures are spent on treating physical disease or physical symptoms.[15] Most countries don't even attempt to systematically measure mental health, let alone social or spiritual health.

Outside the matrix, we realize that mental, social, and spiritual health are important in and of themselves. In a survey of 19,000 people across 19 countries,[16] around 85 percent of respondents said their mental health is as important to them as their physical health, and their spiritual and social health were also listed by the majority as "extremely" or "very important." People share this view across high-, middle-, and low-income countries.

Outside the matrix, we recognize that a large and growing body of research is catching up to a few thousand years of philosophical and religious teachings that recognize the linkages among body, mind, and spirit. University of Michigan researchers concluded that people without a strong life purpose were more than twice as likely to die, specifically from cardiovascular disease, than those who did have a strong life purpose.[17] Scientists at the Chonnam National University Medical School in South Korea found a link between anxiety and eyesight problems.[18] Finally, research from National Academies of Sciences found that loneliness among heart failure patients was associated with around a four times increased risk of death and a 68 percent increased risk of hospitalization.[19]

3. Health is mostly about our ability to function, not just about disease and death

When someone asks, "How's your health?" how do you answer?

[11] Saloni Dattani, Hannah Ritchie, and Max Roser, "Mental health," Our World in Data, August 2021.
[12] "Feeling of loneliness among adults 2021, by country," Statista, November 29, 2022.
[13] Stephen S. Hall, "A doctor and medical ethicist argues life after 75 is not worth living," *MIT Technology Review*, August 21, 2019.
[14] Tarik Endale, "Barriers and drivers to capacity-building in global mental health projects," *International Journal of Mental Health Systems*, 2020, Volume 14, Number 89.
[15] "WHO says governments spend only 2% of budget on mental health," Open Access Government, March 3, 2022.
[16] Clément Desmouceaux, Martin Dewhurst, Daphné Maurel, and Lorenzo Pautasso, "In sickness and in health: How health is perceived around the world," McKinsey, July 21, 2022.
[17] Aliya Alimujiang et al., "Association between life purpose and mortality among US adults older than 50 years," *JAMA Network Open*, 2019, Volume 2, Number 5.
[18] Hee-Ju Kang et al., "Impact of anxiety and depression on physical health condition and disability in an elderly Korean population," *Psychiatry Investigation*, 2017, Volume 14, Number 3.
[19] "Loneliness and social isolation linked to serious health conditions," Centers for Disease Control and Prevention, accessed December 5, 2022.

Inside the matrix, health is anchored in the absence or presence of disease, illnesses, and injury. Clinicians, insurers, academics, and governments use "mortality" and "morbidity," jargon words for death and disease to guide decision making and resource allocation. We discuss, measure, and pay for healthcare based on whether you "have heart failure" or don't. We approve, promote, and pay for drugs, devices, and clinical interventions based on their potential impact on disease and death. These are important and useful concepts, but they are also limiting.

We typically[20] don't define or measure functional implications on our life until and unless it is related to a disease or injury. For example, an orthopedic surgeon may measure knee, hip, or shoulder flexion (the ability to bend) after a surgery to gauge the progress of recovery. But knee flexion is not measured or discussed unless a knee problem emerges even though it is necessary for our ability to walk, lift, and exercise correctly[21] and to avoid slips and falls.

Inside the matrix, there are no broadly used standards for measuring the holistic physical function (for example, walking, gripping, and balancing) of a disease-free 40-year-old woman or the cognitive function (for example, memory, problem-solving) of a disease-free 50-year-old man. This lack of measurement reveals the lack of focus or concern with function.

Outside the matrix, we realize that the absence of disease does not, necessarily, imply great health. Similarly, the presence of disease does not, necessarily, impede function, especially if symptoms are well managed. This reality was substantiated by MHI's 2022 survey in 19 countries—40 percent of those reporting a disease perceived their health as "good" or "very good."

Exhibit 2

Health is mostly about function, not disease or death.

Key aspects of function, by dimension of health

Physical
- physical energy/vitality
- absence of pain
- senses (sight, hearing, smell, taste, touch)
- movement
- sexual function
- continence

Mental
- mental energy/stamina
- cognition (memory, problem solving)
- resilience
- coping
- positivity
- agency

Social
- ability to create and maintain healthy relationships
- ability to participate actively in a community
- empathy
- self-awareness

Spiritual
- meaning and purpose
- centeredness
- healthy sense of self/ identity
- hopefulness
- gratitude
- appreciation of beauty

Note: Grounded in the World Health Organization's (WHO's) definition of health: "A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity"; *Constitution of the World Health Organization*, WHO, 1948.

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[20] Eyesight and hearing are two exceptions where there are strong standards to understand function. Eyesight and hearing are two examples of functions that are reasonably well defined and consistently measured.
[21] Nirtal Shah, "Increasing knee range of motion using a unique sustained method," *North American Journal of Sports Physical Therapy*, 2008, Volume 3, Number 2.

These respondents recognize that health is mostly about living. Strong health helps us lead meaningful, productive, and satisfying lives. Health is the extent to which we have physical and mental energy, whether we can fully use our senses, and the extent to which we can comfortably engage in meaningful activities. Health is our strength, our memory, our ability to solve problems; it is our ability to cope with the challenges of life, our ability to build and sustain intimacy, and our sense of agency, positivity, and purpose (Exhibit 2).

Health is fundamentally about what an individual can do (or not) today and what they are able to do (or not) in the future.

Once we escape from the matrix, we realize that we need better, more standard ways to define, measure, and talk about function across all dimensions of health.

4. Health exists on a spectrum: We can't achieve optimal health if we don't define, measure, or strive for it

If you ask your daughter how she's doing in geometry, would you be satisfied if she responded "Great. I didn't fail the last test"? How well would a football club perform if it only practiced defense? If you asked your physician, "Am I in optimal health?" how would they answer?

Inside the matrix, health is framed almost exclusively in the negative. Achieving a "clean bill of health" means that you haven't been diagnosed with a disease or a major risk factor of disease. Patients are categorized based on the level of the problem: a standard "acuity table" consists of four levels: stable, moderate risk, complex patient, and high-risk patient. The best is "stable" health.

Globally, we spend more than $8 trillion annually to avoid disease, symptoms, and death, yet there are no commonly accepted words or standards to delineate mediocre from great health.[22]

Inside the matrix, the concept of achieving "optimal" health is relegated to the domain of "biohackers," affluent middle-aged people in high-income countries, professional athletes, and celebrities. The implicit assumption is that aspiring to optimal health is a luxury that few can afford metaphorically and literally.

Outside the matrix, we realize that health exists on a spectrum with a negative and positive or optimal end. We realize that achieving better-than-mediocre health is feasible in large numbers. Our recent research supports this conclusion. Of the 13,200 people across 19 countries who reported no disease, around 25 percent indicated being in "very good" health, 55 percent in "good" health, and 20 percent in "fair" or "poor" health. This spectrum of responses was similar across high-, middle-, and low-income countries and across age bands. (Exhibit 3).

Outside the matrix, we aspire to be more than not sick, not disabled, and not suicidal. We want vitality, centeredness, and resilience. We want our brains to work the best they can. We want to be good at building intimacy. We want to be able to walk, play, carry, and build for as long as possible without discomfort.

Outside the matrix, we recognize that striving to achieve optimal (over mediocre) health is a highly effective prevention strategy. We also recognize that aspiring for optimal health is an effective approach to generate real-time, concurrent benefits to individuals and society. A disease-free person who successfully improves their metabolic health, learns to navigate their emotions, prioritizes sufficient high-quality sleep, and avoids harmful content, substances, and stress is likely to enjoy more energy, build stronger relationships, and enhance personal productivity. They are more likely to be a better colleague at work, a better spouse, a better parent, and a better friend (Exhibit 4).

5. *Most* drivers of health sit *outside* conventional healthcare systems and are *modifiable*

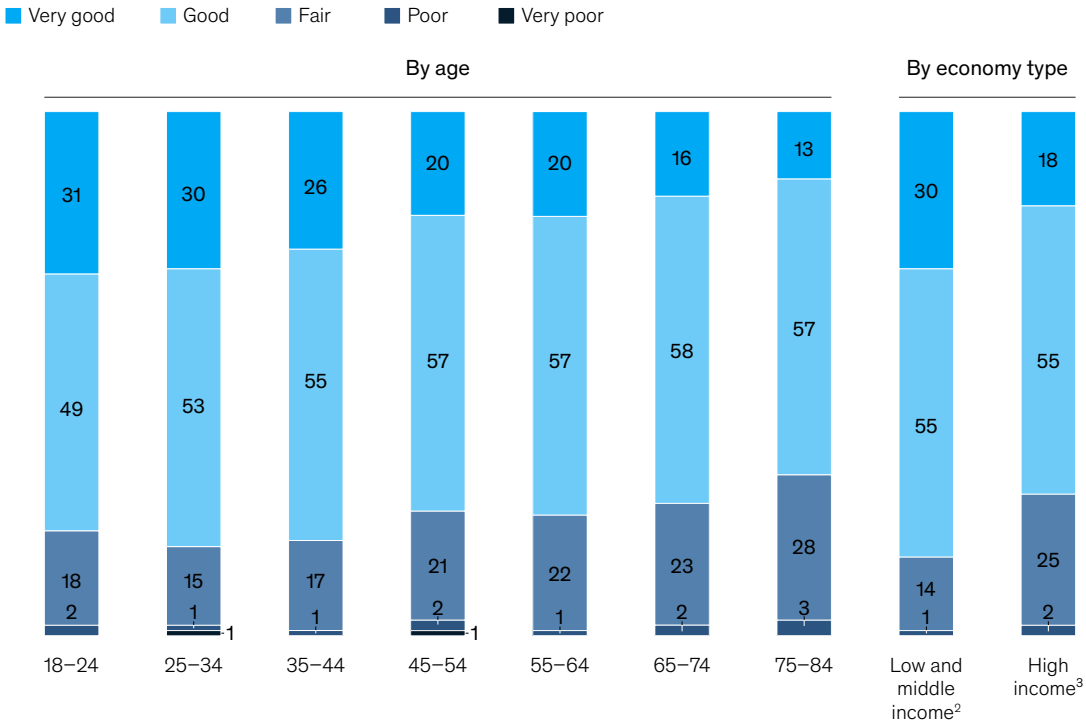
If changing an aspect of your life within your control decreased the odds of acquiring dementia by

[22] "Global spending on health: Weathering the storm," WHO, December 2020.

Exhibit 3

Health exists on a spectrum across ages and economies, independent of disease status.

Perceived overall health when no disease was reported,[1] % of respondents (n = 13,200)



[1]Figures may not sum to 100%, because of rounding.
[2]Argentina, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria, South Africa, and Türkiye.
[3]Australia, France, Germany, Italy, Japan, Sweden, Switzerland, UK, and US.
Source: Institute for Health Metrics and Evaluation; World Bank; McKinsey analysis

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25 percent, would you want to know about it? Would you expect your physician to tell you about it? Would you expect your government, private insurer, or employer to help you achieve it?

Inside the matrix, we assume that the primary drivers of an individual's health are genetics, chance, and access to and adoption of conventional healthcare interventions. We define conventional healthcare interventions as a handful of widely adopted public health strategies (for example, vaccines, sanitation, seat belts, and smoking cessation), the timely detection and diagnosis of disease, and access to clinical interventions like pharmaceuticals, surgery, and therapy provided by licensed clinicians. More than 97 percent of health-related public-, private-, and social-sector expenditures in OECD countries are related to delivering conventional healthcare interventions.[23]

[23] "Health spending in most OECD countries rises, with the U.S. far outstripping all others," Organisation for Economic Co-operation and Development, March 6, 2004.

Exhibit 4

The first step to achieving optimal health is to define it.

Examples of health status, by dimension

WORST → BEST

	Exacerbation	Poor health	Fair health	Strong health
Physical	• physical-health hospitalization • serious accident	• high uncontrollable pain • serious functional limitations • significant fatigue	• regular bouts of fatigue • some functional limitation • unintended physical discomfort	• high stamina/energy • excellent physical mobility, strength, balance, acuity • full sensory function
Mental	• mental-health hospitalization • suicide attempt • burnout or "breakdown"	• symptoms of untreated mental illness • partial cognitive capacity • severe lack of motivation	• bouts of anxiety/ depression • regular lack of motivation • stress affects sleep	• high resiliency • setbacks lead to growth • full cognitive capacity—think, learn, remember, create
Social	• toxic behavior/outburst • overdose abuse • suicide attempt	• social isolation • poor ability to build and maintain healthy relationships	• mixed social interaction • modest empathy • modest community affiliation	• infectious positivity • robust support network • high empathy • deep community affiliation
Spiritual	• toxic shame • hopelessness	• no sense of purpose or belonging, and unhealthy sense of identity	• mixed sense of purpose, belonging, and identity	• deep sense of purpose, belonging, and identity

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When we acknowledge the relevance of a handful of nonconventional drivers such as diet, exercise, and substance use, we frequently refer to these drivers with dismissive terms such as "lifestyle." Deconstructing that word is revealing: the word "life" reflects the belief that the extent to which these drivers are optimized (or not) is mostly the purview of the individual and not affected by systems and structures of society (for example, employment, education, food availability, economics, and social context). The word "style" implies superficiality or inferiority compared to what we consider more legitimate interventions that we label with credibility-enhancing qualifiers like "clinical."

Inside the matrix, we assume that the evidence for conventional health system interventions is much stronger and more reliable than the evidence for interventions associated with nonconventional drivers. Outside the matrix, we recognize that conventional healthcare drivers are critical. Creating more and more equitable access to these resources is just and economically wise. Greater investment to improve conventional interventions offers substantial potential benefits.

We *also* recognize that a large and growing body of evidence suggests that at least 19 of the 23 drivers of our health sit outside conventional healthcare systems. Each of these drivers appears to have an independent, direct, material, and causal impact on our health. These drivers include what we put into our bodies, how we spend our time, when and how we move, what our minds and bodies are exposed to, and what we believe about the nature of reality, ourselves, and other people.

Note: Drivers of health are complex and nonlinear (eg, J-curves, U-curves), interact with one another and their effects can vary by genetics, traits, randomness, etc. Each driver can be optimized (or un-optimized) based on quantity, type, mix, duration, timing/ sequencing and can be a result of both individual choices and structural/environmental influences.

Table. The healthy 23: Drivers of health

Each driver can be optimized or not based on both individual choices and structural/environmental influences. These drivers are in no specific order.

Physical inputs	Diet	Food selection; portions; preparation; eating timing; macro/micro nutrients; fasting/calorie restriction; water consumption
	Supplementation	Frequency; extent of use; type (eg, extracts, teas, vitamins, mineral, herb, botanicals, amino acids, metabolite, probiotics, caffeine)
	Substance use	Frequency; extent of use; type (eg, alcohol, tobacco/nicotine, vaping, cocaine, marijuana, heroin, psilocybin)
Movement	Mobility	Mix of time by position; standing, sitting, walking, posture, typing, neck position, use of fine motor skills
	Exercise	Duration; frequency; type (eg, sports, endurance, high intensity, strength/resistance, stability, flexibility, coordination, individual/group)
	Sleep	Quality; duration; mix by stages; regularity; consistency; alignment to circadian rhythm
Daily living	Productive activity	Work, volunteering, caregiving, hobbies, worshipping, activism, playing music, arts/crafts, travel
	Social interaction	Conversations, meals, vocational interaction, friendships, physical intimacy, marriage/dating, activities; in-person or remote
	Content consumption	Entertainment, literature, news, music, pornography; all formats—online, apps, social medial, paper, in-person, TV, gaming
	Hygiene	Handwashing, bathing, showering, oral care, ear protection, grooming
Exposure	Nature	Time among forests, flowers, bodies of water, wildlife/insects, mountains; day/night sky
	Atmosphere	Temperature; humidity; weather, weather events; radiation; smoke; high heat/cold exposure (sauna, cold plunge)
	Sensory	Screens; sun/exterior light; type/degree of interior light; noise—type, intensity, duration
	Materials	Type (air, water, surfaces, fabrics, containers); contents (toxins, germs, pollutants, heavy metals, allergens)
	Stress	Response to physical, emotional and/or mental challenge (pressure, trauma, excitement); acute and chronic; includes eustress
State of being	Mindsets/beliefs	Attitudes/perspectives toward all aspects of life: religion/philosophy, optimism, agency, nature of people, purpose, hope
	Body composition	Body fat by type of fat; lean muscle mass; morbid obesity
	Physical security	Physical security/safety: absence of war, armed conflict, criminal violence, domestic violence, avoidable accidents
	Economic security	Food security, housing security, income security, access to health care
Healthcare	Vaccination	Regularity and extent of vaccination: MMR, flu, COVID, TB, polio, tetanus
	Detection/ diagnosis	Monitoring; testing; screenings; genetic testing; diagnosis of risk factors, disease and/or conditions
	Clinical intervention	All forms of clinical treatment: surgeries, device implant, pharmacologic; therapy; hearing aids; other medical devices
	Adherence	Extent to which an individual follows a prescribed treatment plan including interventions, extent, frequency, duration, method

(We also provide more detail on evidence of these drivers in "The healthy 23: Drivers of your health and longevity" at the end of the article.)

Thousands of studies and even more anecdotal evidence highlight that these drivers are often the difference between decades of strong function and decades of poor health and/or premature death. Examples include the following:

— Multiple studies demonstrate that exercise alone can deliver between three and five years of extended life and between five and ten years of improved quality of life.[24] Cardio training, strength/resistance training, and high-intensity exercise all appear to be independently valuable and important.[25]

— Optimistic/positive people (a learned behavior) are 35 percent less likely to experience a cardiovascular event compared to a pessimist holding other variables constant. Positivity has also been shown to reduce the prevalence and symptoms of depression and anxiety and improve immune-system function.

— Regular use of saunas at high temperatures decreases the risk of all-cause mortality by as much as 40 percent and the risk of dementia by as much as 66 percent.[26]

— Fasting has shown the ability to reverse type 2 diabetes in large portions of people and reduce the likelihood of cognitive decline. Emerging research is demonstrating that ketogenic diets can help treat serious mental illness.[27] Higher blood glucose levels in nondiabetics is associated with between a 30 percent and 40 percent higher likelihood of cardiovascular and cancer-related death.[28]

— Multiple studies have found DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid) supplementation (fish oil) can lower the risk of cognitive decline, especially in people at high risk for Alzheimer's disease.[29]

— Dozens of studies demonstrate that walking reduces chronic pain, strengthens the immune system, and decreases anxiety, sadness, and fatigue.[30]

— A recent randomly controlled experiment demonstrated that exposure to nature for 60 minutes reduced stress and improved

[24] Kyle Mandsager et al., "Association of cardiorespiratory fitness with long-term mortality among adults undergoing exercise treadmill testing," *JAMA Network Open*, 2018, Volume 1, Number 6; Dong Hoon Lee et al., "Long-term leisure-time physical activity intensity and all-cause and cause-specific mortality: A prospective cohort of US adults," *Circulation*, 2022, Volume 146, Number 7; Carl D. Reimers et al., "Does physical activity increase life expectancy? A review of the literature," *Journal of Aging Research*, 2012, Volume 2012, Number 11; Karmel W. Choi et al., "Assessment of bidirectional relationships between physical activity and depression among adults: A 2-sample Mendelian randomization study," *JAMA Psychiatry*, 2019, Volume 76, Number 4.

[25] Jessica Gorzelitz et al., "Independent and joint associations of weightlifting and aerobic activity with all-cause, cardiovascular disease and cancer mortality in the prostate Lung, Colorectal and Ovarian Cancer Screening Trial," *British Journal of Sports Medicine*, 2022, Volume 56, Issue 22; Haruki Momma et al., "Muscle-strengthening activities are associated with lower risk and mortality in major non-communicable diseases: A systematic review and meta-analysis of cohort studies," *British Journal of Sports Medicine*, 2022, Volume 56, Issue 13.

[26] Tanjaniina Laukkanen et al., "Association between sauna bathing and fatal cardiovascular and all-cause mortality events," *JAMA Internal Medicine*, 2015, Volume 175, Number 4; "Regular saunas could reduce the risk of dementia, new study finds," Alzheimer's Society, December 16, 2016.

[27] Christopher M. Palmer, *Brain Energy: A Revolutionary Breakthrough in Understanding Mental Health – and Improving Treatment for Anxiety, Depression, OCD, PTSD, and More*, Dallas, TX; BenBella Books, November 15, 2022.

[28] Yilin Yoshida et al., "The effect of metabolic risk factors on cancer mortality among blacks and whites," *Translational Cancer Research*, 2019, Volume 8, Number 4; Emily B. Levitan et al., "Is nondiabetic hyperglycemia a risk factor for cardiovascular disease? A meta-analysis of prospective studies," *JAMA Internal Medicine*, 2004, Volume 164, Number 19; Hilde Kristin Refvik Riise et al., "Casual blood glucose and subsequent cardiovascular disease and all-cause mortality among 159 731 participants in Cohort of Norway (CONOR)," *BMJ Open Diabetes Research and Care*, 2021, Volume 9, Issue 1.

[29] Yu Zhang et al., "Intakes of fish and polyunsaturated fatty acids and mild-to-severe cognitive impairment risks: A dose-response meta-analysis of 21 cohort studies," *The American Journal of Clinical Nutrition*, 2016, Volume 103, Issue 2; Greg M. Cole et al., "Omega-3 fatty acids and dementia," *Prostaglandins Leukot Essent Fatty Acids*, 2009, Volume 81, Issue 2–3.

[30] Ekalak Sitthipornvorakul et al., "The effects of walking intervention in patients with chronic low back pain: A meta-analysis of randomized controlled trials," 2017, Volume 34; Dana Guglielmo et al., "Walking and other common physical activities among adults with arthritis — United States, 2019," *Morbidity and Mortality Weekly Report*, 2021, Volume 70, Number 40; David C. Nieman et al., "Upper respiratory tract infection is reduced in physically fit and active adults," *British Journal of Sports Medicine*, 2011, Volume 45, Issue 12; Felipe B. Schuch et al., "Physical activity protects from incident anxiety: A meta-analysis of prospective cohort studies," *Depression & Anxiety*, 2019, Volume 9; Chorong Song et al., "Psychological benefits of walking through forest areas," *International Journal of Environmental Research and Public Health*, 2018. Volume 15, Number 12.

the brain's ability to successfully navigate future stressors.[31]

— More than five hours of daily social media use was associated with between a 35 and 50 percent increased risk of depressive symptoms in adolescents.[32]

— A recent review of medical literature suggests that human sperm counts have fallen by more than 50 percent around the globe over the past 50 years. While the causes are unknown, the lead research suggests that exposure to man-made chemicals, obesity, sedentariness, and ultraprocessed food may play a role.[33]

What's more, these drivers are *modifiable*. They can be improved or weakened based on both individual choices and how systems and structures operate. This is incredibly positive news.

Perhaps for the first time in history, most of us have meaningful agency over our health for most of our lives, regardless of our genetics.

Outside the matrix, we realize that most of the distinctions between "clinical" and "lifestyle" interventions are *mostly* artificial. Why is a pill or surgery a more legitimate health intervention than calorie restriction, lifting weights, meditating, avoiding particular content, or walking in nature? If it works, it works. If it doesn't, it doesn't.

Outside the matrix, we recognize that the totality of evidence is already overwhelming that nonconventional, modifiable drivers of health are deeply relevant to our health. A substantial body of research exists that links each of the 23 modifiable drivers of health to either a material improvement in physical, mental, social, and/or spiritual function and/or to longevity. This is true despite the fact that less than 5 percent of modifiable drivers of health are defined consistently (or at all), captured systematically, and made broadly available as data. It is challenging to research what we do not measure well. This is also an important reason why much of the research demonstrates a correlation and does not fully prove causation.

Outside the matrix, we recognize that the evidence around nonconventional drivers is imperfect, and there is a great deal we don't know about how to optimize each. There is much less clarity around mechanisms of causality, the magnitude of impact that each driver has on each dimension of health, appropriate dosing, interaction effects, and how best to personalize. But outside the matrix, we view these gaps in knowledge as creating an imperative to invest dramatically more resources in researching and understanding these drivers, rather than as a rationale to discount them.

6. Achieving great health is as much about what we pursue as what we avoid

Does eating with loved ones, spending time on meaningful activities, laughing, walking in the park, building new skills, and/or playing games that cause perspiration sound boring or painful?

At some point while discussing health inside the matrix, someone will mention the quip, "You'll live to be a hundred if you give up all the things that make you want to."

The implication is that optimizing health requires sacrifices that are simply not worth it. From a systems perspective, the implication is that humans are so hardwired for "unhealthy" behaviors that large-scale change is unachievable, especially in the context of a consumer-driven economy oriented toward near-term hedonic enjoyment.

[31] Sonja Sudimac et al., "How nature nurtures: Amygdala activity decreases as the result of a one-hour walk in nature," *Molecular Psychiatry*, 2022.
[32] Yvonne Kelly et al., "Social media use and adolescent mental health: Findings from the UK Millennium Cohort Study," *eClinicalMedicine*, 2019, Volume 6.
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Outside the matrix, we understand that this sentiment is mostly false and highly fatalistic. It overemphasizes the benefits of avoiding what's harmful versus pursuing what's beneficial. It inaccurately pits short-term hedonic benefits against longer-term satisfaction.

Optimizing health requires some moderation of select activities, substances, content, food, relationships, etcetera. Valuing moderation itself is associated with strong health. It can be difficult to give up harmful habits, especially when reinforced by systems and culture.

But it is *more* true that optimizing health requires taking action and pursuing objectives that mostly result in near-term happiness and long-term well-being. A more constructive mindset is to emphasize the many beneficial and intrinsically rewarding aspects of optimizing health. Pursuing favorable actions also has the benefit of "crowding out" harmful behaviors.

In fact, optimizing *most* drivers of health is *mostly* about doing more of what people enjoy intrinsically so they can continue to do those things *longer*. This is terrific news. Eating healthy food, including with moderate alcohol, especially with loved ones, is enjoyable. Building stronger, healthier relationships is rewarding. Spending time in "flow" at work is rewarding. Sleeping well is rejuvenating. Most people enjoy some form of sport or physical activity as long as it is not labeled "exercise." Most people want to learn to cope with challenges more effectively. Most of the actions required to optimize longer-term health also have near-term physiological benefits like improved mood, energy, and performance.

7. People are more than patients; they deserve to be empowered with greater health literacy

Who is the best steward of your health? What actions can you take to improve your own health or the health of people in your circle of influence?

Inside the matrix, human health is primarily the responsibility of health ministers, healthcare providers, and the life sciences industry. Private payers, employers, and social institutions play important roles in select countries. Individuals are recognized as relevant but are thought of and treated as "patients." Merriam-Webster's dictionary defines a patient as "an individual awaiting or under medical care and treatment." Patients are passively "awaiting" and, by definition, engaged only when treatment is warranted.

Most people do not possess strong health literacy. In Europe, the most recent large-scale survey estimated that less than 20 percent of respondents self-assessed that they possessed excellent health literacy.[34] During the COVID-19 pandemic, 50 percent of adults in Europe reported not having the required competencies to take care of their health.[35] Moreover, few countries have made improving health literacy a priority.[36]

Outside the matrix, we conclude that in an increasingly complex world where day-to-day living is the primary determinant of health, individuals must be the long-term stewards of their own health. Recognizing the primacy of individuals does not in any way undermine the role of institutions, systems, and structures. It acknowledges the reality that in most cases there is no other person or institution with a commensurate level of information, incentive, or influence as an individual themselves.

Recognizing this reality should lead to more substantial investment and doing more to improve

[34] "Health literacy: The solid facts," WHO, 2013.
[35] Leena Paakkari and Orkan Okan, "COVID-19: Health literacy is an underestimated problem," *The Lancet*, 2020, Volume 5, Number 5.
[36] "Health literacy around the world: Policy approaches to wellbeing through knowledge and empowerment," *The Economist*, 2021.

the health literacy of the world's population. Functioning well in modern societies requires acquiring a minimum health literacy threshold, but also knowledge across a range of disciplines including economics (for example, checking accounts, credit cards, mortgages), construction (for example, basic home repair), and technology (for example, computer usage). How can an individual steward their metabolic health without basic knowledge of energy balance, macro nutrients, and insulin? Health-literate individuals are better equipped to optimize their own health including making day-to-day trade-offs. They are more demanding customers of health-related products, services, and treatments. And they are more likely to demand and/or drive adaptations in public policy, employment, and other systems that positively affect their health.

8. History suggests that the societal adaptations required to improve health are feasible; every person and institution on Earth has a role to play

Did you ever think it possible that many billions of people would wear uncomfortable masks in public?

Inside the matrix, the skeptic reminds us that achieving large-scale behavior change is difficult. They remind us that many aspects of modern life and consumer-demand-driven economies seem to be at odds with many actions required to optimize health.

Once we escape the matrix, however, we realize that humans are incredibly adaptable. We realize that large-scale behavior change is not only possible, it is normative over time.

To highlight just a few examples of large-scale changes in human behavior with a positive effect on human health, consider the following:

— In 1920, 1 percent of US homes had electricity and indoor plumbing. Indoor plumbing led to massive decreases in deaths from diarrhea, enteritis, and typhoid fever.[37]

— Prevalence of smoking among men has declined 50 percent or more in Japan, many European countries, and the United States over the past 50 years.[38]

— Mask wearing in public went from globally rare to common in several Asian countries in the 1990s, then to a near global norm during the COVID-19 pandemic.

— Seat belt usage increased from 14 percent in 1983 to 90 percent in 2016.[39]

— Nutritional fortification and supplementation have benefited billions of people.[40]

— Workplace injury, illness, and death remain unacceptably high but have fallen dramatically over the past one hundred years.[41]

We note that most of the favorable changes in human behavior typically involve a virtuous cycle of institutional and individual action. To this end, we believe every institution on Earth has a role to play

[37] James D. Lutz, "Lest we forget, a short history of housing in the United States," Ernest Orlando Lawrence Berkeley National Laboratory, 2004; David Eugene Kimbrough, "A study of lead service lines in California," *Water Practice and Technology*, 2022, Volume 17, Issue 9.
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in improving health literacy and adapting strategies, policies, and resources to help optimize health.

Once they escape from the healthcare matrix . . .

Every government ministry, including finance, education, agriculture, environmental, transportation, housing, energy, telecommunications, and commerce considers how to use its resources to positively affect drivers of health while developing strategies to improve health literacy.

Every business realizes it is in the business of health. They realize that most (if not all) of the products and services they offer do (or could) affect one of the modifiable drivers of health. They recognize that helping people optimize their health could be an attractive economic opportunity and positively affect society.

Every employer recognizes the profound impact that an employee's experience has on their health. The extent to which an employee finds meaning in their work, their physical experience, the nature of their work, their interpersonal interactions, the way in which they are developed (or not), the degree and stability of compensation and benefits, and an employer's policies and programming materially affect every modifiable driver of health. Employers realize that adapting to improve the health of their employees is both just and economically attractive.

Every conventional healthcare stakeholder embraces the need to modernize and adapt. They continue to innovate and improve the ability to detect, treat, and cure disease with conventional interventions. They also embrace that they are in the best position to define, measure, and promote an understanding of health that is holistic and anchored in function. They commit to defining and promoting optimal health and to better understanding and applying insights from nonconventional drivers of health. They fundamentally recognize that empowering individuals must be the foundation of our health systems. As such, they lead by example in improving health literacy and supporting individuals.

Authors' note: We close by reaffirming our gratitude for the millions of people dedicated to improving our health. You literally save our lives every day.

We invite you and every other reader to venture outside the healthcare matrix, to aspire to great health and act more decisively. It may be uncomfortable, but we believe dramatic improvements in human health are possible if we act. And we want to hear from you! Follow and share your thoughts with us on LinkedIn. Subscribe to receive communications from MHI.

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The authors wish to thank Roy Berggren, Martin Dewhurst, Cédric Gousseau, Anna Hextall, Michael Korenberg, Ashini Kothari, Robyn Macrae, Ayesha Mirchandani, and Jordan VanLare for their contributions to this article.

McKinsey Health Institute

Table

The healthy 23: Drivers of your health and longevity

December 2022

Modifiable drivers of health heavily influence overall health status. A large and growing body of evidence suggests that out of 23 drivers, 19 reside outside of traditional healthcare systems. Each of these drivers appears to have an independent, direct, material, and causal impact on health and longevity. What's more, these drivers are modifiable.

Drivers	Description	Illustrative highlights
Physical inputs		
Diet	Food selection; portions; preparation; eating timing; macro/micro nutrients; fasting/calorie restriction; water consumption	• Fasting has shown the ability to reverse type 2 diabetes and reduce the likelihood of cognitive decline[1] • Emerging research is demonstrating that ketogenic diets can help treat serious mental illness[2] • A range of healthy diets has been shown to reduce risks of disease, extend life, and improve mood[3] • A Mediterranean diet including olive oil and nuts is associated with a 30% lower risk of cardiovascular disease[4] • Drinking 1–2 sugar-sweetened beverages per day is associated with a 14% higher risk of mortality from any cause[5] • Higher blood glucose levels in nondiabetic patients is associated with 30–40% higher likelihood of cardiovascular and cancer-related death[6]

Drivers	Description	Illustrative highlights
Physical inputs (continued)		
Supplementation	Frequency; extent of use; type (eg, extracts, teas, vitamins, minerals, herbs, botanicals, amino acids, metabolite, probiotics, caffeine)	• Multiple studies have found DHA and EPA supplementation (fish oil) lowers risk of cognitive decline, especially among people at high risk for Alzheimer's disease, and is linked to 13% reduced risk of heart attacks[7] • Drinking 1–4 cups of coffee per day is associated with a lower mortality risk of 12–17%[8] • Despite having enough food, 2 billion people do not get enough micronutrients (eg, up to 500,000 children who lack vitamin A become blind every year)[9] • Vitamin D supplementation reduced the risk of death from cancer by 15%[10]
Substance use	Frequency; extent of use; type (eg, alcohol, tobacco/nicotine, vaping, cocaine, marijuana, heroin, psilocybin)	• Smokers who stop smoking at age 40 can recover 9 of 10 years lost due to lifelong habit[11] • Drinking >17 units of alcohol a week has been linked to accelerated DNA aging, cognitive decline, and cardiovascular disease[12] • When used in a time-bound and appropriately dosed manner, oral cannabinoids have been shown to reduce chemotherapy-induced nausea by up to 38 percent[13]
Movement		
Mobility	Mix of time by position; standing, sitting, walking, posture, typing, neck position, use of fine motor skills	• Dozens of studies demonstrate that walking reduces chronic pain, strengthens the immune system, and significantly decreases anxiety, sadness, and fatigue[14] • Numerous large observational studies show a strong link between walking and all-cause mortality[15] • In 2019, 15 million years of life were lost or lived with disability because of occupational ergonomics (matching workplace conditions and infrastructure to suit human factors such as posture)[16]
Exercise	Duration; frequency; type (eg, sports, endurance, high intensity, strength/ resistance, stability, flexibility, coordination, individual/group)	• Extensive robust research shows that consistent exercise alone can extend life by 3–5 years and improve quality of life by 5–10 years[17] • Burning 1,000 calories a week can reduce mortality by 20%[18] • A study found that people over age 60 who participated in weekly balance and resistance training showed a 34% reduction in falls[19] • People with poor fitness (25th percentile of VO_2 max) have a mortality risk 2.75× higher than those with high fitness (75th percentile)[20] • High-intensity activity for a relatively short period of time appears to stimulate brain growth in older adolescents [21]
Sleep	Quality; duration; mix by stages; regularity; consistency; alignment to circadian rhythm	• Sleep quality, duration, and consistency are associated with better academic performance in college students[22] • Sleeping <6 hours vs 7–9 hours a night is associated with an all-cause mortality increase of 13%[23] • 2 weeks of 4 hours of sleep per night results in a ~50% reduction in ability to process glucose[24] • Sleeping >9 hours a night has been associated with lower cardiovascular health[25] • Insomnia is linked to increased risk of cognitive impairment by 27%[26]

Drivers	Description	Illustrative highlights
Daily living		
Productive activity	Work, volunteering, caregiving, hobbies, worshipping, activism, playing music, arts/crafts, travel	• Multiple studies have found that more engaged employees experience better physical and mental health[27] • Laid-off workers in the US were found to be 54% more likely to have fair or poor health, and 83% more likely to develop a stress-related condition, such as stroke, heart attack, heart disease, or arthritis[28] • There is a strong correlation between health (including longevity) and engagement in altruistic activities (eg, people who volunteer have fewer symptoms of depression, anxiety, and stress-induced pain compared with non-volunteers)[29]
Social interaction	Conversations, meals, vocational interaction, friendships, physical intimacy, marriage/dating, activities; in-person or remote	• Dozens of studies have observed an average 50% increased likelihood of survival for participants with stronger social relationships[30] • Social integration during childhood is related to blood pressure and BMI in adulthood[31] • Sports with more inherent social interaction (tennis, badminton, soccer) are associated with greater longevity gains than other sports[32] • Owning a pet is associated with decreased risk of cardiovascular disease[33]
Content consumption	Entertainment, literature, news, music, pornography; all formats—online, apps, social media, newspaper, in-person, TV, gaming	• Consuming pornography for >30 minutes in a row is linked to a higher prevalence of erectile dysfunction[34] • >5 hours' daily use of social media was associated with a 35–50% increased risk of depressive symptoms in adolescents[35]
Hygiene	Handwashing, bathing, showering, oral care, ear protection, grooming	• Washing hands with water and soap reduces by 50% the risk of spreading diarrheal disease[36] • Personal hygiene significantly impacts our risk of infection and affects our mental health (eg, poor oral health can exacerbate social withdrawal, isolation, and low self-esteem). It can also cause problems with speaking and eating and is correlated with higher mortality for older adults[37]
Exposure		
Nature	Time among forests, flowers, bodies of water, wildlife/insects, mountains; day/night sky	• Exposure to nature, or higher levels of greenery, lowers levels of depression, increases motivation for physical activity, and can lower the risk of respiratory disease[38] • Death from respiratory disease is reduced by 33% in women who have high levels of vegetation in their homes[39] • A recent random control experiment demonstrated that exposure to nature for 30 minutes–1 hour reduced stress and improved the brain's ability to successfully navigate future stressors[40]

Drivers	Description	Illustrative highlights
Exposure (continued)		
Atmosphere	Temperature; humidity; weather, weather events; radiation; smoke; high heat/cold exposure (sauna, cold plunge)	• Multiple studies show that regular use of saunas at high temperatures decreases the risk of all-cause mortality by as much as 40% and the risk of dementia as much as 66%[41] • Worldwide, air pollution causes 7 million deaths annually, of which 3.2 are due to indoor air pollution (eg, cooking with solid fuel)[42]
Sensory	Screens; sun/exterior light; type/degree of interior light; noise: type, intensity, duration	• Regular exposure to sunlight can avoid a decrease in a hormone that can trigger depression symptoms (seasonal affective disorder)[43] • Noise pollution leads to 12,000 premature deaths a year in the EU, mostly through a link with heart attacks and diabetes[44]
Materials	Type (air, water, surfaces, fabrics, containers); contents (toxins, germs, pollutants, heavy metals, allergens)	• Research suggests weighted blankets may benefit people with anxiety, pain and autism[45] • Exposure to toxins from consumer products, even cheap jewels, can cause physical damage[46] • Globally, lead exposure is estimated to account for 30% of intellectual disability without a known cause[47] • A study associated children who had high exposure to pesticides with a 7-point IQ drop compared with children who had low exposure[48]
Stress	Response to physical, emotional and/or mental challenge (pressure, trauma, excitement); acute and chronic; includes eustress	• Eustress, or favorable stress, including time in "flow," is associated with stronger cognitive function, resilience, and improved immune function[49] • Chronically elevated levels of stress can increase the risk of cardiovascular disease, neurodegenerative disease, and metabolic disease[50] • *The Lancet* recently reported that individuals have a 3× increased risk of mortality the year they are diagnosed with a stress-related disorder[51]
State of being		
Mindsets/beliefs	Attitudes/perspectives toward all aspects of life: religion/ philosophy, optimism, agency, nature of people, purpose, hope	• Optimists (a learned behavior) are 35% less likely to experience a cardiovascular event compared with pessimists[52] • A study by the University of Kentucky demonstrated that immunity is stronger in individuals with positive thoughts, even if they are healthy[53] • A randomized, controlled trial of 4,000 children demonstrate that 30 minutes of training around a "growth mindset" had strong and lasting positive effects on mental health and academic performance[54] • Multiple studies highlight an association between gratitude and better physical health, more friends, stronger resilience, reductions in depression, and better sleep[55]
Body composition	Body fat by type of fat; lean muscle mass; morbid obesity	• Increasing lean muscle mass can improve metabolic function across all age groups and prevent falls in the elderly[56] • Excess body fat accounted for 120 million years lost to disability or premature death; 37% of the years lost occurred among nonobese individuals[57] • Visceral fat is most closely linked to health span and longevity[58]

Drivers	Description	Illustrative highlights
State of being (continued)		
Physical security	Physical security/ safety: absence of war, armed conflict, criminal violence, domestic violence, avoidable accidents	• Exposure to violence and breaches to safety have long-term effects on health. Between 1990–2017, war contributed to an extra 29 million civilian deaths[59] • 1.7 billion people are exposed to temperatures and humidity that can be deadly[60]
Economic security	Food security, housing security, income security, access to healthcare	• High-income individuals are 5× more likely to self-report strong health[61] • The rising cost of living has adversely impacted population health. In 2021, >6,000 deaths in England were directly attributable to fuel poverty[62] • Impoverished conditions can permanently alter a child's brain architecture and increase risk of developing chronic illnesses[63]
Healthcare		
Vaccination	Regularity and extent of vaccination: measles, mumps, rubella (MMR); flu; COVID-19; tuberculosis; polio; tetanus	• In 2021, COVID-19 vaccinations are estimated to have prevented 14.4 million deaths worldwide[64] • The polio vaccine spared 16 million from paralysis since 1998 and has achieved 99.9% of polio eradication[65]
Detection/ diagnosis	Monitoring; testing; screenings; genetic testing; diagnosis of risk factors, disease and/or conditions	• Advancements in diagnosing disease has enabled us to halt progression of disease and prevent death from malignancy[66] • In the UK, cervical cancer screening every 5 years was found to have reduced deaths from cervical cancer by 70%[67] • A study conducted by the Office for National Statistics shows that for most cancers, survival at 1 and 5 years is much higher if the cancer is detected early (at stage 1) (eg, for colorectal cancer, 1-year survival if detected at stage 1 is 97.7%, falling to only 43.9% if detected at stage 4)[68]
Clinical intervention	All forms of clinical treatment: surgeries, device implant, pharmacologic; therapy; hearing aids; other medical devices	• 5-year cancer survival rates in the US have increased from 50% in the 1970s to 67% by the 2010s, including for cancers detected late, due to improved treatments[69] • HIV medication has saved 16.5 million lives since 2001[70]
Adherence	Extent to which an individual follows a prescribed treatment plan including interventions, extent, frequency, duration, method	• A 25% decrease in adherence to inhaled steroids for asthma doubles the rate of asthma-related hospitalization[71] • 200,000 premature deaths in Europe per year are due to poor adherence, and mortality rates for patients with diabetes and heart disease who don't adhere to medication are nearly twice as high than for those who do[72]

Disclaimer: Drivers of health are complex. Effects can vary among individuals based on genetics, traits, randomness, and interaction with other drivers. Each driver can be optimized (or not) based on a myriad of individual choices and structural/environmental influences.

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Better health among Middle Eastern employees can start with awareness

by Mona Hammami, Ahmed Osman, Vanessa Schneider, and Mischa Zielke

A survey of workers in four Middle Eastern countries provides a baseline for understanding the state of employee health and informing strategies to improve outcomes.

Previous McKinsey research has shown that for the past century or more, improvements in health have not only delivered immense social benefits[1] but also served as a powerful catalyst for economic growth by expanding the labor force and boosting productivity.[2] When employers invest in the health and well-being of their workforce, they have often made gains in productivity and reduced attrition.[3]

Countries in the Middle East and around the globe are increasingly embracing a modern definition of health that encompasses not just the absence of physical illness but an all-encompassing state of equilibrium between a person's internal and external environments. This broader definition includes four dimensions: physical, mental, social, and spiritual health.[4]

In early fall 2022, the McKinsey Health Institute surveyed more than four thousand employees in four Middle Eastern countries that are part of the Gulf Cooperation Council (GCC)—Kuwait, United Arab Emirates (UAE), Kingdom of Saudi Arabia, and Qatar—to understand the state of employee health in the region (see sidebar "About the survey and what we measured").

This article summarizes what our respondents told us about the state of their health as they saw it, namely, that:

— Two-thirds of GCC respondents reported symptoms of poor mental health and well-being, or had a mental-health condition diagnosis.[5]

— One in three GCC respondents reported burnout symptoms. Many also reported struggles with physical health conditions, but better social and

Two-thirds of survey respondents, from countries in the Gulf Cooperation Council, reported symptoms of poor mental health and well-being.

[1] *Adding years to life and life to years*, McKinsey, March 29, 2022.
[2] "Prioritizing health: A prescription for prosperity," McKinsey Global Institute, July 8, 2020.
[3] Andrew J. Oswald et al., "Happiness and productivity," *Journal of Labor Economics*, October 2015, Volume 33, Number 4.
[4] *Adding years to life and life to years*, March 29, 2022.
[5] Responses include reporting having a mental-health or substance-use diagnosis now or in the past; having sought or considered treatment for a mental-health or substance-use condition; or having listed at least one of the following: high symptoms of anxiety, burnout, depression, or distress.

spiritual health, with different patterns among demographic groups.

— Three-quarters of GCC respondents reported being happy at work, which appeared to be correlated with employees listing a sense of purpose in their work and in their relationships at work.

Some targeted actions by GCC countries point to growing recognition of the importance of promoting employee health and well-being. For example, the UAE has been an early adopter in integrating employee health and well-being into its governmental agenda by setting up the National Program for Happiness and Wellbeing.[6]

[6] National Programme for Happiness and Wellbeing, United Arab Emirates, accessed January 2022.

About the survey and what we measured

The McKinsey Health Institute conducted a survey in four Gulf Cooperation Council countries in August and September 2022. This survey involved more than four thousand employees in the Kingdom of Saudi Arabia, Kuwait, the United Arab Emirates, and Qatar.

We assessed a range of health outcomes (mental, physical, social, and spiritual), business outcomes (with a focus on intent to leave), and workplace factors (with a strong focus on toxic workplace behaviors) in our survey.

Health outcomes assessed in our survey included:

Mental health: *An employee's cognitive, behavioral, and emotional state of being. Mental health is needed for an individual to understand and interact with the world through memory and language. Mental health allows us to experience joy, direct anger, limit harmful, impulsive behavior, and avoid serious depressive episodes. Mentally healthy individuals have the resilience to cope with normal stresses and adverse events while maintaining a positive and realistic sense of self.*[1]

Within this survey, we looked at four subfacets:

1. ***Burnout symptoms:*** An employee's experience of extreme tiredness, reduced ability to regulate cognitive and emotional processes, and mental distancing (Burnout Assessment Tool).[2]
2. ***Distress:*** An employee experiencing a negative stress response, often involving negative affect and physiological reactivity (4DSQ Distress Screener).[3]
3. ***Depression symptoms:*** An employee having little interest or pleasure in doing things, and feeling down, depressed, or hopeless (PHQ-2 Screener).[4]
4. ***Anxiety symptoms:*** An employee's feelings of nervousness, anxiousness, or being on edge, and not being able to stop or control worrying (GAD-2 Screener).[5]

Physical health: *The extent to which an employee can competently perform physical tasks and activities without substantial discomfort. It includes the capacity to move through the environment in which one lives with confidence and independence and to control one's interactions with the physical world via fine-motor control. Employees with good physical health have sharp sensory capacities with keen senses of touch, vision, hearing, taste, and smell. Physically healthy employees are full of energy and vitality, free from the twin scourges of debilitating pain or fatigue, as per the World Health Organization (WHO).*[6]

In this survey, we used a self-developed tool modifying questions from the WHO's 2012 quality of life assessment, looking at[7]:

[1] Silvana Galderisi et al., "Toward a new definition of mental health," *World Psychiatry*, June 2015, Volume 14, Number 2; Vikram Patel, "The Lancet commission on global mental health and sustainable development," *Lancet*, October 2018, Volume 392, Number 10157; *Adding years to life and life to years*, March 29, 2022.
[2] Wilmar Schaufeli, Hans De Witte, and Steffie Desart, *User Manual – Burnout Assessment Tool (BAT) – Version 2.0*, KU Leuven, Belgium, 2019.
[3] Johannes Anema et al., "Validation study of a distress screener," *Journal of Occupational Rehabilitation*, April 2009, Volume 19, Issue 3.
[4] Kurt Kroenke et al., "The patient health questionnaire-2: Validity of a two-item depression screener," *Medical Care*, November 2003, Volume 41, Issue 11; Simon Gilbody et al., "Screening for depression in medical settings with the Patient Health Questionnaire (PHQ): A diagnostic meta-analysis," *Journal of General Internal Medicine*, Volume 22, Issue 11.
[5] Amit Sapra et al., "Using generalized anxiety disorder-2 (GAD-2) and GAD-7 in a primary care setting," *Cureus*, May 2020, Volume 12, Issue 5.
[6] The WHO quality of life (WHOQOL) - Brief, 2012 revision, WHO, 2012.
[7] Ibid.

About the survey and what we measured (continued)

1. if the stress from respondents' jobs cause them to engage in unhealthy behaviors (for example, inadequate nutrition, lack of physical activity, lack of sleep)
2. if respondents are self-reporting physical symptoms (experiencing physical pain that is preventing them from doing what they need to do at work)

Social health: Represents an employee's ability to build healthy, nurturing, genuine, and supportive relationships. Employees in good social health have the capacity to form meaningful connections with others, to both receive and provide social support. Social health gives employees a strong sense of belonging to a community.[8]

In this survey, we used a self-developed tool modifying questions from the WHO's 2012 quality of life assessment, looking at a range of social factors (including personal relationships, participating in group activities, time spent on nonwork activities and important people in their life).[9]

Spiritual health: Enables people to integrate meaning in their lives. Spiritually healthy people have a strong sense of purpose, belonging, or identity, which can correlate to better health.[10] *They feel a broad sense of connection to something larger than themselves, whether to a community, a calling, or a form of divinity. Spiritual health helps people feel rooted and mindful in the present moment.*[11]

In this survey, we used a self-developed tool modifying questions from Spiritual Health and Life Orientation Measure, 2010, and the Work and Meaning Inventory, 2012, looking at a range of spiritual factors (including sense of fulfilling a greater purpose, living in harmony, and feeling energized by work).[12]

Work-related outcomes and factors assessed in our survey included:

Intent to leave: In this survey, we used a self-developed tool to assess an employee's desire to leave the organization in which they are currently employed in the next three to six months.

Toxic workplace behavior: In this survey, we used a self-developed tool to assess an employees' experience of interpersonal behavior that leads them to feel unvalued, belittled, or unsafe, such as unfair or demeaning treatment, noninclusive behavior, sabotaging, cutthroat competition, abusive management, and unethical behavior from leaders or coworkers.

The analysis of share of respondents reporting at least one mental-health challenge was determined by aggregating respondents reporting having a mental-health diagnosis, now or in the past; reporting to have sought or considered treatment for a mental-health condition; or having listed at least one of the following: symptoms of anxiety, burnout, depression, or distress.

Consideration of cross-country surveys

As cited in previous global pieces about health, such as "In sickness and in health: How health is perceived around the world," a range of cultural and methodological factors can influence respondents' answers to survey questions. These factors include, but are not limited to, language and word association, number ranges, comprehension issues, and attitudes toward taking surveys. It is important to note that comparisons between respondents in different countries are not only due to differences in attitudes and/or behaviors between respondents but also reflect response styles that are specific to cultural and geographic locations. Any insights drawn from cross-country comparisons should be interpreted with consideration of these multiple influences to survey responses.

[8] Linda J. Waite, "Social well-being and health in the older population: Moving beyond social relationships," *Future Directions for the Demography of Aging: Proceedings of a Workshop*, Washington, DC: National Academies Press, 2018; Corey Lee M. Keyes, "Social well-being," *Social Psychology Quarterly*, June 1998, Volume 61, Number 2.
[9] The WHO quality of life (WHOQOL), 2012.
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[12] Ibid.

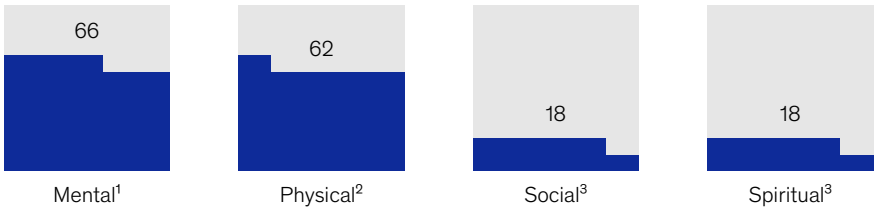
However, further opportunities exist, on a systematic basis, for employers and governments across the region. This article explores the status of employee health and well-being, and includes data and insights that GCC leaders could consider using to inform strategies and actions to address the causes of ill health among employees.

Insight 1: More than 60 percent of GCC respondents say they have experienced mental- and physical-health challenges at some point in their lives

Physical and mental health are intimately entwined. Mental health, like physical health, exists along a continuum from optimal health to poor health. As we described in our article "Present company included, prioritizing mental health and well-being for all," most employees are likely to experience some symptoms of poor mental health and well-being at some point during their working years.[7] Sixty-six percent of GCC respondents said they have experienced at least one mental-health challenge at some point in their lives—a figure slightly higher compared with other global research.[8] This is proportional to physical-health challenges, where more than two-thirds also report at least one symptom of poor physical health.

The majority of Gulf Cooperation Council survey respondents said that they had experienced mental- and physical-health challenges.

Facing challenges in the 4 health dimensions, % of respondents reporting at least 1 challenge



[1]Responses for mental health include: reporting having a mental-health or substance-use diagnosis now or in the past; reporting having sought or considered treatment for mental-health or substance-use condition; or having listed at least one of the following: high symptoms of anxiety, burnout, depression, or distress.
[2]Responses for physical health include: reporting having a physical-health diagnosis in the past or current physical pain.
[3]Responses for social and spiritual health include: reporting at least one social- or spiritual-health challenge.
Source: Gulf Cooperation Council Employee Mental Health and Well-Being Survey, McKinsey, 2022 (n = 4,064 in 4 countries)

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[7] Julia Anas and Kelly Greenwood, "It's a new era for mental health at work," *Harvard Business Review*, October 4, 2021.
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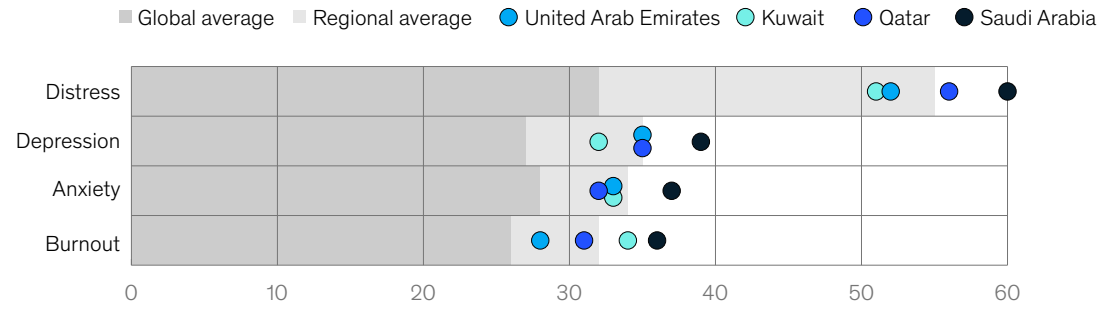
Insight 2: Anxiety, depression, and distress symptoms are all high among GCC respondents, reflecting a global trend

Globally, one in four respondents are reporting burnout symptoms, which is correlated with poor mental health. That figure is closer to one in three among GCC employees surveyed, a finding that is consistent with other studies.[9] Additionally, GCC respondents also reported higher levels of distress at the time of the survey, which may be a precursor to burnout symptoms (55 percent, compared with 32 percent).[10]

More than twice the percentage of GCC respondents report an intent to leave their jobs, compared with employees globally (36 percent, compared with 16 percent). Although the Great Attrition[11] is a global phenomenon, with factors that include employees not feeling valued, some GCC-specific factors could be exacerbating intent to leave.[12] Specific to the region, variable factors can include sponsorship requirements for expatriates, or competition for local talent.

Symptoms of depression, anxiety, and distress were all higher than the global average among Gulf Cooperation Council survey respondents.

Mental-health outcomes by Gulf Cooperation Council (GCC) country,[1] % of respondents citing outcome



[1]Responses for mental health include: reporting having a mental-health or substance-use diagnosis now or in the past; reporting having sought or considered treatment for mental-health or substance-use condition; or having listed at least one of the following: high symptoms of anxiety, burnout, depression, or distress.
Source: Gulf Cooperation Council Employee Mental Health and Well-Being Survey, McKinsey, 2022 (n = 4,064 in 4 countries)

McKinsey & Company

[9] Turki Alqarni et al., "Prevalence of stress, burnout, and job satisfaction among mental healthcare professionals in Jeddah, Saudi Arabia," *PloS One*, April 27, 2022, Volume 17, Number 4; Shatha Ali et al., "The prevalence of burnout among interns in Riyadh, Saudi Arabia, and its relation to engaging in unethical behaviors," *Middle East Current Psychiatry*, October 2021, Volume 28.
[10] Maria Frederika Agnes van Hoffen, "Stress and sickness absence," Vrije Universiteit Amsterdam, 2021.
[11] Aaron De Smet, Bonnie Dowling, Marino Mugayar-Baldocchi, and Bill Schaninger, "'Great Attrition' or 'Great Attraction'? The choice is yours," McKinsey, September 8, 2021.
[12] Philippe Fargues, Nasra M. Shah, and Imco Brouwer, *Working and living conditions of low-income migrant workers in the hospitality and construction sectors in the United Arab Emirates*, Gulf Labour Markets and Migration, 2019.

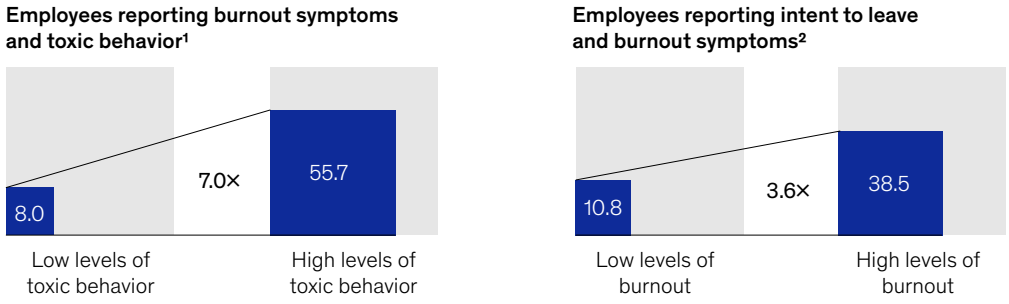
Insight 3: Symptoms of burnout and intent to leave are often driven by toxic behavior at work

Globally, employees reporting high levels of toxic behavior at work are more likely to experience burnout, leading to an increased intention to quit.

In our survey, GCC employees who report experiencing high levels of toxic behavior at work are seven times more likely to experience burnout symptoms, compared with a global average of eight times more likely (see sidebar "What is toxic workplace behavior?"). In turn, respondents experiencing burnout symptoms are four times more likely to report that they intend to leave their employers in the next three to six months (compared with a global average of six times). While GCC respondents show a similar overall pattern to the global findings, they are less likely to show signs of burnout in response to toxic behavior and are less likely to leave.[13] Recent data has indicated that toxic culture is the single largest predictor of resignation during the Great Attrition and ten times more predictive than compensation alone.[14]

Employees reporting high levels of toxic behavior at work are more likely to experience burnout, leading to an increased intention to quit.

Results of toxic behavior reported at work, % of respondents reporting



Note: "Low" refers to bottom quartile of respondents; "high" refers to top quartile of respondents.
[1]Share of employees reporting burnout symptoms by level of toxic behavior reported at work.
[2]Share of employees reporting intent to leave their job in the next 3–6 months by level of burnout experienced.
Source: Gulf Cooperation Council Employee Mental Health and Well-Being Survey, McKinsey, 2022 (n = 4,064 in 4 countries)

McKinsey & Company

[13] "Addressing employee burnout: Are you solving the right problem?," McKinsey, May 27, 2022.
[14] Charles Sull et al., "Toxic culture is driving the Great Resignation," *MIT Sloan Management Review*, January 11, 2022.

What is toxic workplace behavior?

Toxic workplace behavior is interpersonal behavior that leads to employees feeling unvalued, belittled, or unsafe, such as unfair or demeaning treatment, noninclusive behavior, sabotaging, cutthroat competition, abusive management, and unethical behavior from leaders or coworkers. Selected questions from this dimension include agreement with the statements "My manager ridicules me," "I work with people who belittle my ideas," and "My manager puts me down in front of others."

Insight 4: Poor physical health affects some respondents' ability to work

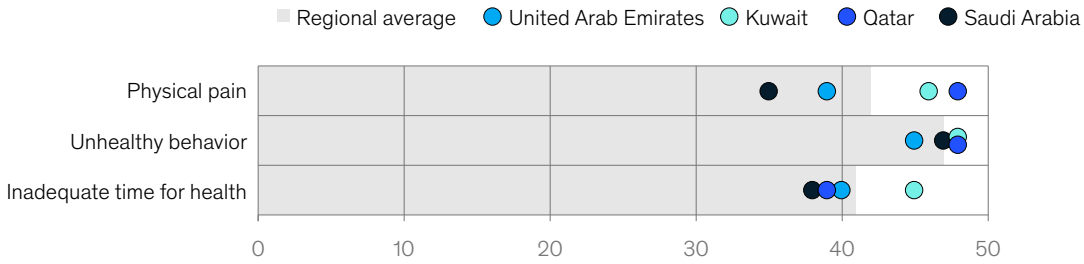
Overall, an average of about 42 percent of respondents report experiencing physical pain that prevents them from doing some work-related activities.

Almost half of respondents say the time they dedicate to their jobs curbs the time they have to care for physical health. Some respondents say that underlying behaviors, such as inadequate sleep or unhealthy eating, affects their physical health.

Along with work-related challenges, rapid socioeconomic development is one of several factors in the region that has contributed to a more sedentary lifestyle (among the highest in the world) and a concurrent rise in obesity and diabetes.[15] Chronic diseases are now the leading causes of morbidity and mortality.[16]

About 42 percent of survey respondents reported experiencing physical pain that prevents them from doing some work-related activities.

Outcomes by country, % of respondents citing outcome



Source: Gulf Cooperation Council Employee Mental Health and Well-Being Survey, McKinsey, 2022 (n = 4,064 in 4 countries)

McKinsey & Company

Almost half of respondents say the time they dedicate to their jobs curbs the time they have to care for physical health.

[15] Zlatko Nikoloski et al., "Obesity in the Middle East," in *Metabolic Syndrome: A Comprehensive Textbook*, New York, NY: Springer, 2015.
[16] "Obesity in the Middle East," *Metabolic Syndrome*, 2015; Aly Bernard Khalil, "Diabesity in the Arabian Gulf: Challenges and opportunities," *Oman Medical Journal*, July 2018, Volume 33, Issue 4.

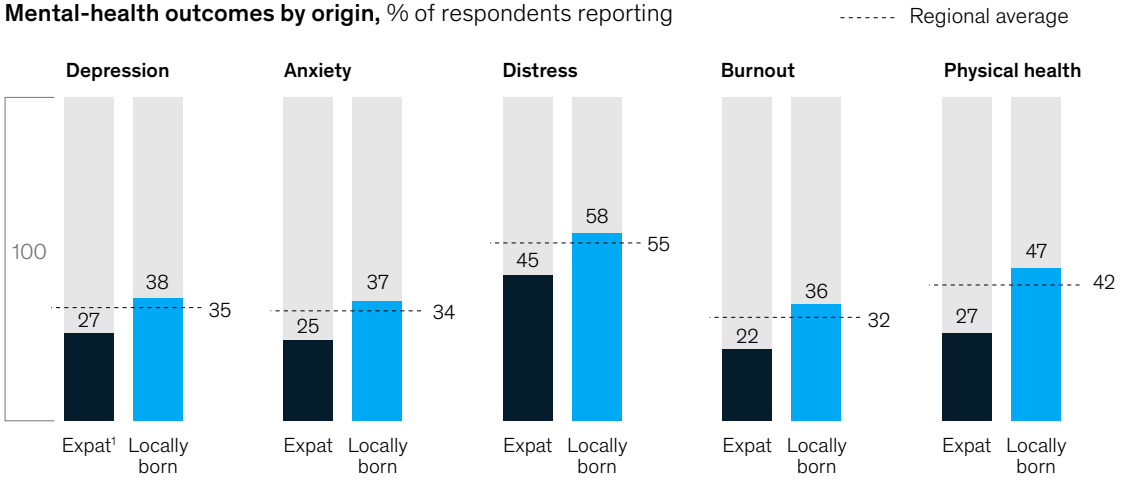
Insight 5: Locally born respondents report higher rates of poor mental and physical health than expatriate employees

Expatriate employees surveyed[17] report symptoms of depression, anxiety, and burnout at rates that are at or close to global averages, whereas locally born respondents report higher rates of depression, anxiety, distress, and burnout. Furthermore, almost 40 percent of locally born workers say they expect to leave their current organization within the next six months. Some research has suggested that anonymity in the survey may allow locally born workers to acknowledge their mental-health challenges without concerns about deep-rooted stigma.[18]

Physical health is also stronger for expatriates, with 27 percent reporting symptoms of physical pain (compared with 47 percent for locally born respondents). This may be linked to expatriate workers being younger than locally born workers and/or having to pass health-screening tests from host countries.

Locally born employees report significantly higher rates in both mental- and physical-health domains.

Mental-health outcomes by origin, % of respondents reporting



[1]Expatriate.
Source: Gulf Cooperation Council Employee Mental Health and Well-Being Survey, McKinsey, 2022 (n = 4,064 in 4 countries)

McKinsey & Company

[17] Respondents are classified as locally born if the question "What is your nationality?" has been answered with either Saudi, Qatari, Kuwaiti, or Emirati in the respective countries; otherwise, respondents have been classified as expatriates.
[18] Yara M. Asi, "Increasing awareness of mental health needs in Arab populations," Arab Center Washington DC, March 18, 2022.

Targeted actions that could improve outcomes

Actions, both preventive and reactive, taken by employers at three levels—organizational, team, and individual—could help to improve employee health and well-being in the GCC region.

Governments also play an important role in fostering health and well-being and in creating an environment for society to flourish and organizations to act. They could consider measures to prevent overall damage to individuals and the system, while having the infrastructure to react if symptoms have already materialized, such as:

— ensure health and well-being is on their agendas at every level, clarify their aspirations, and craft action plans to drive innovation and impact (for example, by following the WHO's guidelines for mental health at work[19])

— boost awareness with an inspirational narrative (for example, a campaign reinforcing the importance of employee health) and foster dialogue to reduce stigma

— define regulatory standards for psychological health and safety in the workplace (for example, possible penalties for organizations that fail to comply)

For example, UAE has developed clear positioning and ambitions regarding 90 initiatives supporting its National Wellbeing Strategy.[20] Among those are a Happiness and Wellbeing Policy Bundle, which sets guidelines and requirements for all groups in society; the Network of Happiness and Wellbeing chief officers working on developing programs promoting health and well-being at the workplace, where participants must achieve a Happiness and Wellbeing diploma; and the Global Dialogue for Happiness and Wellbeing raising overall awareness and fostering alignment among governments and organizations.[21] (For more on happiness, see sidebar "The role of happiness.")

[19] "Guidelines on mental health at work," WHO, September 28, 2022.
[20] UAE National Wellbeing Strategy 2031, United Arab Emirates' Government portal, accessed December 2022.
[21] "Majid Al Futtaim achieves the WELL health-safety rating for its HQ and announces one of MENA region's largest WELL health-safety rating enrollments in the retail sector," WELL press release, June 29, 2022.

The role of happiness

Among respondents in this survey, the most reported complaint affecting social and spiritual health is a lack of happiness with amount of time spent on nonwork-related activities (9 percent of respondents).

"Happiness" refers to agreement or strong agreement with the statement, "I feel happy at work most of the time." Employees who rate themselves as happy at work are also significantly more likely to indicate they have strong relationships with others at work or feel an overall sense of purpose (correlates with happiness scores of 0.29 and 0.24, respectively).

Yet what is behind who feels happiness and why? While we found no immediate association between physical health and happiness, social and spiritual health seem to be associated with higher levels of happiness. It also appears correlated to having an especially strong sense of work purpose and satisfaction with coworker relationships.[1] Interest in and examination of happiness in the region is steady: a 2015 report found that UAE, Qatar, and Saudi Arabia were the three happiest countries to work in the Middle East region,[2] while one ongoing research project looks at the effects of the UAE Happiness and Wellbeing policy implementation.[3]

[1] "Satisfaction" refers to agreement or strong agreement and "dissatisfaction" refers to disagreement or strong disagreement with the statements "I am satisfied with personal relationships at work" or "The work I do serves a greater purpose."
[2] Suhail Masri, "The Middle East's top three happiest countries to work in," Gulf Business, May 14, 2015.
[3] Omneya Omar, "Signing up for happiness: An exploratory study of workforce changes in the UAE market in response to the National Program for Happiness and Wellbeing," *Middle East Journal of Positive Psychology*, December 23, 2018, Volume 4, Issue 1.

Successful approaches maintain a few focus areas over time and encourage role modeling and sustained ownership by leaders

Organizations can examine actions that drive employee health and well-being (see sidebar "Organizations could take a systemic approach to improving employee mental health and well-being"). Additionally, each employee can individually drive mental health and well-being. As illustrated by the examples above, this involves three common themes:

— *First, start with a diagnosis.* Understanding the baseline can help choose how to prioritize which issues are the most pressing, and where to start in addressing them.

— *Second, choose one or two health dimensions of focus and target goals and priorities based on the diagnostic.* What are the most impactful opportunities for change? What is the realistic vision for the well-being strategy, accounting for the constraints faced by an organization? For example, Majid al Futtaim's focus on workplace involves expanding into different health arenas (for example, a "biggest loser" challenge to promote physical health).[22] Similarly, individuals could consider ways to incorporate habits such as a daily active break or meditation. The goal is to experience fast successes before getting intimidated by time constraints or limited resources.

— *Third, leaders should role-model interventions, change ways of working from the ground up, and make a sustained commitment over time.* Early adopters on all levels help accelerate uptake intervention programs and can serve as ambassadors to raise awareness of health agendas and programs. For example, the UAE hosts the "Global Dialogue for Happiness and Wellbeing" to bring together experts from around the world to share best practices and expertise. Majid Al Futtaim's "WeCare" representatives are based in each store and discuss professional and individual needs with their colleagues. The goal is not only to establish new standards of what good looks like but also to act as a multiplier for a shared overall benefit.

  On a societal and organizational level, leadership commitment plays a crucial role not only in terms of clear positioning but also in the actual doing. One example is a driver awareness campaign started by Ibrahim Al-Zu'bi, chief sustainability officer at Majid al Futtaim. The goal is to show a genuine purpose-driven change that rallies the society, the organization, and all employees behind a shared goal.

— *Finally, well-being metrics need to be linked to employee performance and organizational outcomes, and relentlessly tracked.* At a governmental level, societal impact of initiatives also needs to be measured and tracked.

Making the investment to improve employee health and well-being is not easy—and often means committing to a journey over time. This can lead to an upward trajectory in sustained individual and organizational performance with an employer, and in the communities and societies in which they operate.

[22] *Dare today, change tomorrow: Sustainability report 2017*, Majid Al Futtaim.

Organizations could take a systemic approach to improving employee health and well-being

We suggest eight actions that will drive improvement in employee health and well-being.

For example, as part of its company-wide sustainability strategy, "Dare today, change tomorrow," Majid al Futtaim has the ambition of creating healthy workplaces, underpinned by a new Healthy Workplaces Policy. This policy sets new standards for the design and amenities of physical workplaces, as well as corporate well-being programs and a "WELL" certification.[1]

As individuals, managers could be encouraged to take ownership of health and well-being with personalized and bite-sized interventions. As a result, they not only take care of their own health and well-being but also act as role models for people they lead. Interventions may include:

- encouraging assessment of health across the four health dimensions via the latest real-time health measurements, set aspirations, and take steps to achieve them for themselves and their teams
- offering education related to individual health status (for example, via an integrated health platform) and highlighting that external support is offered
- starting small and staying focused, embedding one habit at a time to improve physical health (dedicate time for exercise, improve sleep hygiene), mental health (meditate, engage in meaningful activities), spiritual health (practice yoga, connect with a faith community), and social health (interact with peers, join local teams or interest groups)

In addition to its top-down policies and precautionary measures implementing the highest health and safety standards for each individual, Aldar Properties fosters employee-driven initiatives leveraging advanced systems and technology. With a focus on providing remote working options, health offerings are highly digitized; employees have access to an online well-being platform and the ability to sign up for live sessions with health authority professionals.[2]

Eight key actions drive improvement in employee health and well-being.

Source: Gulf Cooperation Council Employee Mental Health and Well-Being Survey, McKinsey, 2022 (n = 4,064 in 4 countries)

McKinsey & Company

[1] Omneya Omar, "Signing up for happiness: An exploratory study of workforce changes in the UAE market in response to the National Program for Happiness and Wellbeing," *Middle East Journal of Positive Psychology*, December 23, 2018, Volume 4, Issue 1.
[2] "Aldar supports nationwide efforts to protect health and wellbeing," UAE Today, December 22, 2022.

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The authors wish to thank Aarati Ajay, Jacqueline Brassey, Erica Coe, Amadeo Di Lodovico, Neil Fisher, Renata Giarola, Sriparna Gogoi, Brad Herbig, Sina Israel, Barbara Jeffery, and Roxy Merkand for their contributions to this article.

Gen Z mental health: The impact of tech and social media

by Erica Coe, Andrew Doy, Kana Enomoto, and Cheryl Healy

A new McKinsey Health Institute survey finds that Gen Z's social media engagement can feel negative but can also help with finding mental health support and connectivity.

Much like many relationships a person might have between ages 18 and 24, the relationship a young person has with social media can be complicated. No matter where they live, respondents in a new global survey said social media usage can lead to a fear of missing out (FOMO) or poor body image, but it also can help with social connections and self-expression.

McKinsey Health Institute's (MHI's) 2022 Global Gen Z Survey asked more than 42,000 respondents in 26 countries across continents questions based on the four dimensions of health: mental, physical, social, and spiritual.[1] MHI then analyzed differences and similarities across generations and countries, with a hope of informing the broader dialogue around Gen Z mental health.

Gen Zers, on average, are more likely than other generations to cite negative feelings about social media.[2] They are also more likely to report having poor mental health. But correlation is not causation, and our data indicates that the relationship between social media use and mental health is complex. One surprise: Older generations' engagement with these platforms is on par with Gen Zers. For example, baby boomers in eight of the 26 countries surveyed report spending as much time on social media as Gen Zers, with millennials being the most likely to post. And while negative impacts of social media were reported across cohorts, positive effects were even more common—more than 50 percent of all groups cited self-expression and social connectivity as positives from social media.

There are also signs that technology provides access to supportive mental health resources for younger people. Gen Z respondents are more likely than other generations to use digital wellness apps and digital mental health programs.[3] Additionally, respondents indicate that certain aspects of social media use can benefit their mental health, such as using social media for self-expression. Young refugees and asylum seekers are among those most likely to cite social media as a tool to stay connected and decrease loneliness.

In the six insights below, MHI delves deeper into the ways in which mental health, technology, and social media intersect for our respondents (see sidebar "Methodology" for further detail). This survey covered additional topics such as climate change and spiritual health (for selected insights, see sidebars "Climate change is a concern for many respondents" and "Gen Z and spiritual health: Insights").

[1] Participants were surveyed on the following nine key topics: overall health and well-being, mental health in the workplace, spiritual health and religion, social determinants of health, social media and digital health services, mental health service utilization, mental health among students, attitudes toward mental health, and global current events. As with all surveys, these data reflect a moment in time and MHI makes no long-term approximations about how these results will trend over time.
[2] Social media is defined here as apps to connect, potentially broadly, with other users. It does not include direct messaging apps.
[3] Digital wellness apps are defined as consumer-driven digital applications that aim to reduce stress, improve well-being and productivity, and address nonclinical conditions for consumers, focusing on topics such as meditation, sleep tracking, cognitive behavioral therapy, and fitness. Digital mental health programs are telehealth programs that offer remote appointments with a healthcare provider (for example, physician, therapist), either over video or phone.

More than 50 percent of all groups cited self-expression and social connectivity as positives from social media.

Methodology

To gain a better understanding of Gen Z in comparison with other generations, the McKinsey Health Institute conducted an internet-based survey in May 2022 in ten European countries (France, Germany, Italy, the Netherlands, Poland, Spain, Sweden, Switzerland, Türkiye, and United Kingdom), with approximately 1,000 completes per country (including around 600 Gen Z). In August 2022, an additional 1,600 completes per country (including 600 Gen Z) were collected from 16 mostly non-European countries (Argentina, Australia, Brazil, China, Egypt, India, Indonesia, Ireland, Japan, Mexico, Nigeria, Saudi Arabia, South Africa, United Arab Emirates, United States, Vietnam). In total, the survey collected responses from 42,083 people, including 16,824 Gen Z individuals (mostly 18–24-year-olds and including a negligible minority of 13–17-year-old non-European respondents), 13,080 millennials (25–40 years old), 6,937 Gen Xers (41–56 years old), 5,119 baby boomers (57–75 years old), and 123 from the Silent Generation (76–93 years old).

Within each country, the survey applied weights to match the distribution of age cohorts, gender, and share of population with tertiary education in the sample to the country's national census. The sample was drawn from populations with access to the internet, which made the samples more representative of Gen Z respondents, in which nearly all individuals with access to the internet are active technology users; however, for other generations, this is less likely to be the case. This analysis reflects self-reported results in 2022.

Considerations for cross-generational surveys

The survey focused on how respondents—mainly Gen Z—were feeling at the time they were surveyed. Therefore, we cannot determine whether differences in answers between age cohorts are caused by an intrinsic change in attitudes and behaviors or are merely induced by age differences: it is possible that Gen Z will eventually think and behave like millennials, Gen X, or baby boomers, when they reach those ages.

Considerations for surveys conducted online

The survey was conducted online. Therefore, it may not accurately reflect the behaviors or attitudes of individuals who do not have reliable online access. This can be particularly significant in various aspects of life, given that the internet can have a profound impact on the information we access and how we process it.

Considerations for cross-country surveys

Cross-country, sociocultural differences can impact perceptions, scale usage, and affect other factors that may influence responses. However, we cannot automatically conclude that these differences are objective. For instance, the variations in answers on an agreement scale may be due to the respondent's inclination to agree or disagree and their propensity to choose extreme answers such as "strongly disagree" or "strongly agree."

Although we relied on cultural experts and youth reviewers to ensure equivalence of meanings across languages during translations, some observed differences across countries may still be induced by the translations.

To measure country differences, we computed country averages and used them to calculate simple averages across countries. By doing so, we treated each country equally, regardless of its population size.

Gen Z respondents report challenges with health across most dimensions

Although many individuals around the world are struggling with their health, there are meaningful differences within groups.

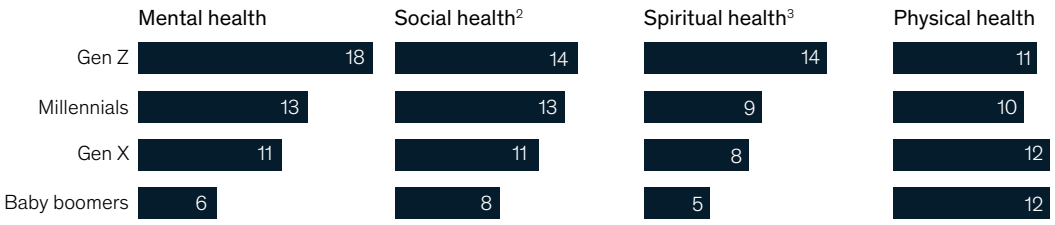
Globally, one in seven baby boomers say their mental health has declined over the past three years, compared with one in four Gen Z respondents. Female Gen Zers were almost twice as likely to report poor mental health when compared with their male counterparts (21 percent versus 13 percent, respectively).

In most surveyed countries, a higher proportion of Gen Z respondents said their mental health was poor or very poor when compared with other dimensions of health (16 percent in Gen Z and 7 percent for baby boomers). However, in China, Egypt, Nigeria, Saudi Arabia, United Arab Emirates, and Vietnam, Gen Z respondents reported that they struggled most with their social health. Overall, mental health experiences varied by region, with Gen Z participants in Saudi Arabia, Egypt, and Nigeria rating their mental health as "very good" with the highest frequencies.

While Gen Z tends to report worse mental health, the underlying cause is not clear. There are several age-specific factors that may impact Gen Z's mental health independent of their generational cohort, including developmental stage, level of engagement with healthcare, and familial or societal attitudes.

A higher share of Gen Z survey respondents report poor mental, social, and spiritual health compared with other generations.

Share of respondents reporting their health as 'poor' or 'very poor' by dimension of health,[1] %



Note: Gen Z oversample; weighted by gender, age, and socioeconomics; dates fielded: May 5–June 27, 2022, for France, Germany, Italy, Netherlands, Poland, Spain, Switzerland, Türkiye, and UK; and Aug 26–Nov 2, 2022, for other countries.
[1]Question: Please rate your health across the following dimensions: social, mental, spiritual, physical. Respondents who answered "very good," "good," or "neutral" are not shown.
[2]Social health represents an individual's ability to build healthy, nurturing, genuine, and supportive relationships. People in good social health have the capacity to form meaningful connections with others, to both receive and provide social support.
[3]Spiritual health enables people to integrate meaning in their lives. Spiritually healthy people have a strong sense of purpose. They feel a broad sense of connection to something larger than themselves, whether to a community, a calling, or to a form of divinity. We note that strong spiritual health does not necessarily imply the adoption of religious beliefs, in general, or any specific dogma.
Source: McKinsey Health Institute Global Gen Z Survey (2022) (n = 41,960)

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Almost everyone is using social media, but in different ways

More than 75 percent of respondents in all age groups said they use and check social media sites at least ten minutes a day.

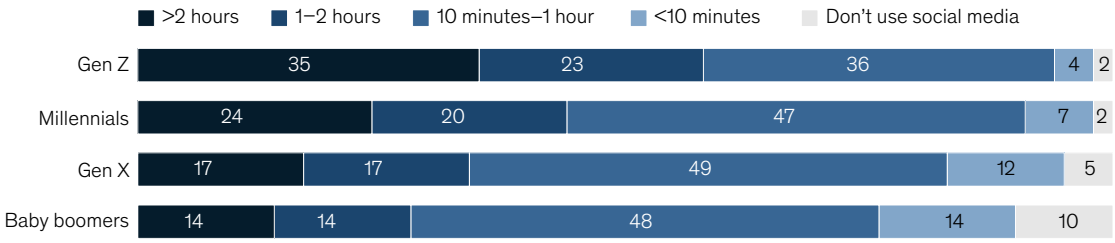
Younger generations tend to engage with social media regularly, in both active and passive ways. Almost half of both millennial and Gen Z respondents check social media multiple times a day. Over one-third of Gen Z respondents say they spend more than two hours each day on social media sites; however, millennials are the most active social media users, with 32 percent stating they post either daily or multiple times a day.

Whether less active social media use by Gen Z respondents could be related to greater caution and self-awareness among youth, reluctance to commit, or more comfort with passive social media

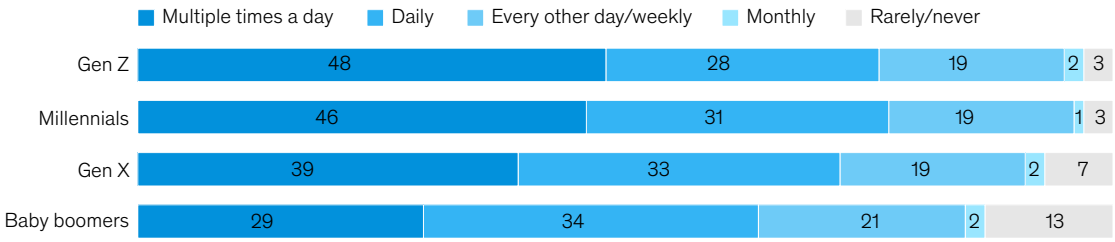
Everybody uses social media, but most Gen Z respondents spend at least one hour a day.

Social media habits by generation

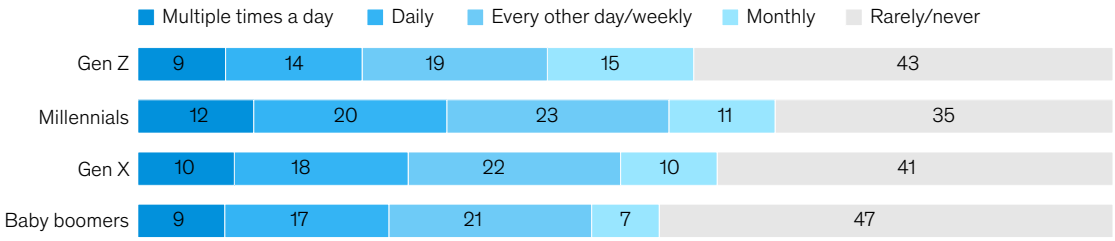
Time spent on social media daily,[1] % of respondents (n = 41,960)



Social media check-in frequency,[2] % of respondents who use social media (n = 40,684)



Social media posting frequency,[3] % of respondents who use social media (n = 40,684)



Note: Figures may not sum to 100%, because of rounding.
[1]Question: How much time, on average, do you spend on social media (not including messaging apps) each day?
[2]Question: How often do you check in on your social media accounts (not including messaging apps)?
[3]Question: How often do you post on your social media accounts (not including messaging apps)?
Source: McKinsey Health Institute Global Gen Z Survey (2022)

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use remains up for debate. Studies have shown that passive social media use (for example, scrolling) could be linked to declines in subjective well-being over time.[4]

Gen Zers and millennials are more likely than other generations to say social media affects their mental health

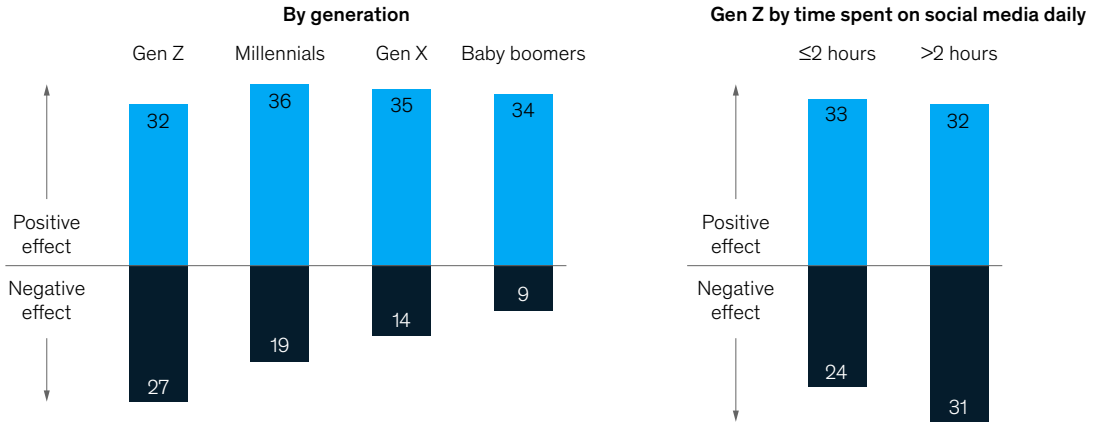
Studies of young adults and their social media use have shown an inverse relationship between screen time and psychological well-being,[5] with higher utilization associated with poorer well-being. Other research indicates the nature of the relationship individuals have with social media can have a greater impact on their mental health than time spent.[6]

Our findings show a nuanced relationship between social media use and mental health. While around one-third of respondents across cohorts report positive impacts of social media on mental health, generations differ in reported negative impacts.

Negative effects seem to be greatest for younger generations, with particularly pronounced impacts for Gen Zers who spend more than two hours a day on social media and Gen Zers with poor mental health. Gen Z respondents from Europe and Oceania were most likely to report negative impacts from social media, and respondents from Asia were least likely (32 percent and 19 percent, respectively).[7]

While social media and tech have a consistent positive impact across all age cohorts, the negative impact increases substantially for younger ages.

Reported impact of technology and social media on mental health,[1] % of respondents



[1]Question: How strongly do the following factors affect your mental health? Shown are the answers for "Technology and social media"; respondents who answered "does not affect my mental health" or "don't know/not applicable" are not shown.
Source: McKinsey Health Institute Global Gen Z Survey (2022) (n = 41,960)

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[4] Philippe Verduyn et al., "Passive Facebook usage undermines affective well-being: Experimental and longitudinal evidence," *Journal of Experimental Psychology: General*, 2015, Volume 144, Number 2.
[5] Jean Twenge et al., "Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study," *Preventive Medicine Reports*, 2018, Volume 12.
[6] Mesfin A. Bekalu, Rachel F. McCloud, and K. Viswanath, "Association of social media use with social well-being, positive mental health, and self-rated health: Disentangling routine use from emotional connection to use," *Health Education & Behavior*, 2019, Volume 46, Number 2.
[7] Participants were requested to rank 13 factors, including technology and social media, on how they perceive their impact on mental health. There is the possibility for varying interpretation of what classifies as negative or positive effects. Differences across generations and regions could be influenced in part by social media algorithms.

While the positive impact stays comparable, older generations report fewer negative effects

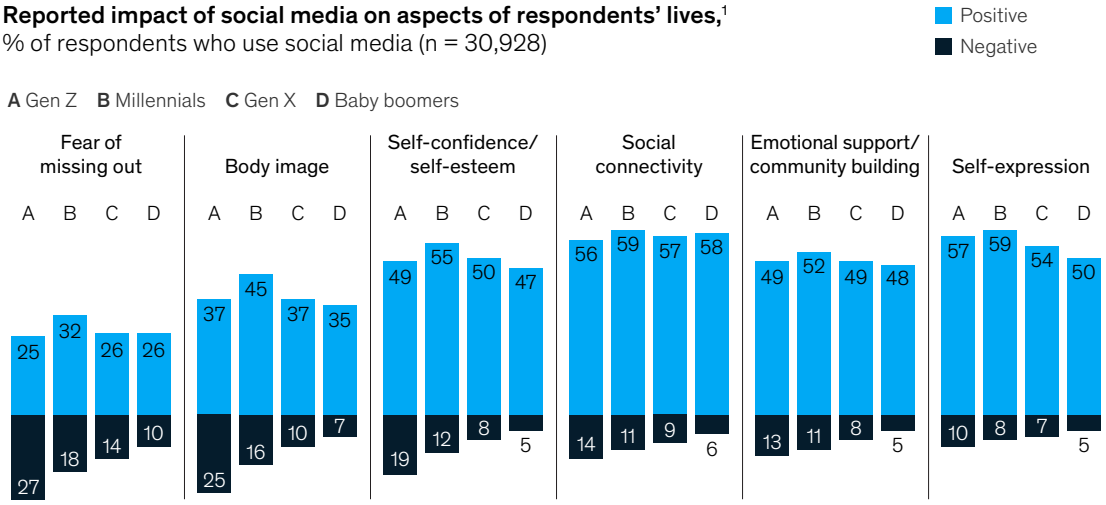
All generational cohorts in the survey said that social media use had the most positive impact on self-expression and social connectivity. Self-reported refugees and asylum seekers cite higher levels of positive impact than others across all aspects.

Across generations, there are more positive than negative impacts reported by respondents; however, the reported negative impact is higher for Gen Z. Respondents from high-income countries (as defined by World Bank) were twice as likely to report a negative impact of social media on their lives than respondents from lower-middle-income countries (13 percent compared with 7 percent).

When compared with their male counterparts, a higher proportion of female Gen Zers said social media had a negative impact on FOMO (32 percent versus 22 percent), body image (32 percent versus 16 percent), and self-confidence (24 percent versus 13 percent).

Respondents' assessment of the impact of social media ranges substantially depending on the dimension.

Reported impact of social media on aspects of respondents' lives,[1]
% of respondents who use social media (n = 30,928)



Note: Gen Z oversample (covers ages 13–24); weighted by gender, age, and socioeconomics; dates fielded: Aug 26–Nov 2, 2022, for Argentina, Australia, Brazil, China, Egypt, India, Indonesia, Ireland, Japan, Mexico, Nigeria, Saudi Arabia, South Africa, UAE, US, and Vietnam.
[1]Respondents who answered "no effect" are not shown.
Source: McKinsey Health Institute Global Gen Z Survey (2022)

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Positive aspects of technology may include increased access to health resources

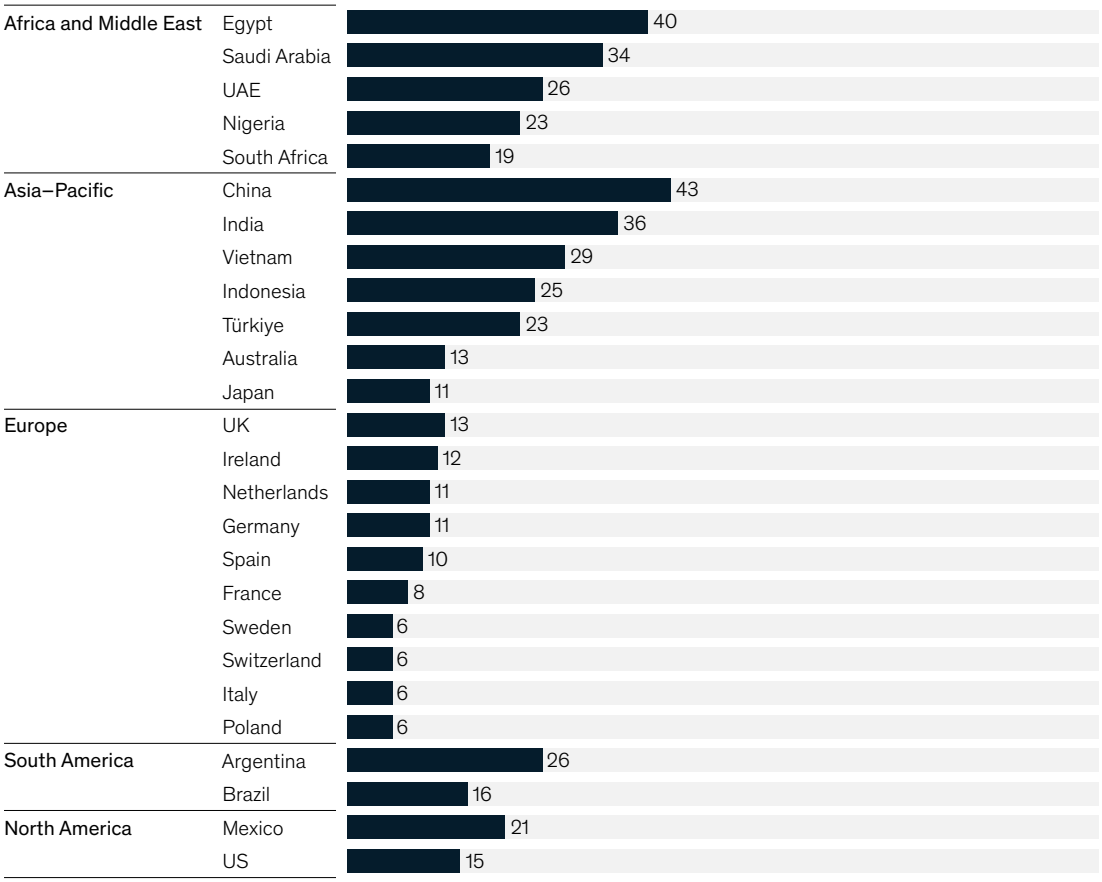
Across generations, more than one in four respondents report using digital wellness apps as compared with one out of five using digital mental health programs (28 percent compared with 19 percent, respectively). Fifty percent more Gen Z respondents reported using digital mental health programs than Gen X or baby boomers (22 percent for Gen Z versus 15 percent for Gen X and baby boomers).

Among those respondents who report using digital mental health programs, most Gen Zers say they would likely keep using them (65 percent); other generations are even more committed, with 74 percent reporting that they would likely continue to use the programs. Four out of five respondents across all generations report that these programs benefit their mental health.

While evaluation of outcomes and effectiveness requires continued study, digital health resources may play an important role in supporting mental health globally, especially when in-person resources are limited or geographically inaccessible. For certain populations, digital health resources could be the preferred method of obtaining support.

Respondents' use of digital mental-health programs varies widely.

Reported use of digital mental-health programs in the past 12 months, % of respondents (n = 41,960)



Source: McKinsey Health Institute Global Gen Z Survey (2022)

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Most find help on their own or by referral

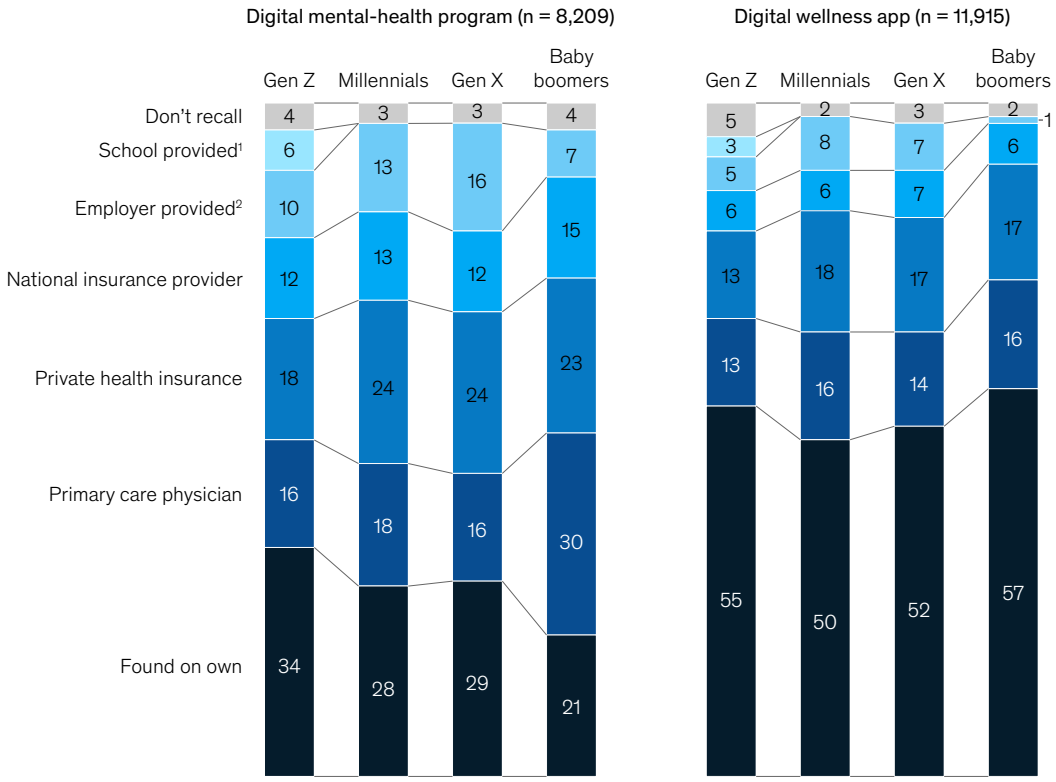
Thirty-four percent of Gen Z respondents who use digital mental health programs and apps say they found them on their own. This proportion increases to approximately 50 percent in Brazil, Indonesia, Mexico, and South Africa. In other countries, primary care physicians and healthcare payers (insurance plans) were listed as primary access points to digital mental health programs.

No matter the geography, employers have growing opportunities to promote workplace well-being and ensure employees have access to the evidence-based mental health resources they need.

At least a third of respondents in most countries and generational cohorts said physical, mental, social, and spiritual health resources were important or very important in choosing an employer, and Gen Z gave particular weight to mental health resources. Given that Gen Z is a growing percentage of the workforce, and that few Gen Z respondents cited employers as a primary access point for help, there may be room for employers to further engage around mental health in the future.

While respondents find digital wellness apps mostly on their own, referrals remain important for digital mental-health programs.

Source of access to digital mental-health programs and digital wellness apps,
% of respondents who accessed service in past 12 months



Note: Figures may not sum to 100%, because of rounding.
[1]Option only suggested to respondents who answered that they were students to the question: "What is your current employment status?"
[2]Option only suggested to respondents who answered that they were working to the question: "What is your current employment status?"
Source: McKinsey Health Institute Gen Z Brain Health Survey, 2022

McKinsey & Company

Technology and social media can be a part of the solution

Social media and technology, while part of the broader dialogue around youth mental health, can be powerful tools in promoting well-being and offering scaled mental health support. For example, developers might consider embedding algorithms that make it easier for youth expressing psychological distress to find support groups, crisis hotlines, or emergency mental health services. Additionally, digital mental health companies could consider partnering with virtual and community-based providers to connect people with high-acuity needs to timely and culturally-appropriate crisis services.

Around the world, communities are struggling to provide young people with someone to call, someone to respond, or a safe place to get help during mental health, substance use, and/or suicidal crises. The availability of crisis supports globally is varied, with the majority of countries having no national suicide or mental health crisis line. In addition, communities in every geography lack adequate community mental health services infrastructure to respond to the volume of crises young people experience each year, instead relying on schools, emergency rooms, hospitals, law enforcement, or families to bridge a gap that could save lives and livelihoods. Dispatching specially trained mobile teams or providing a safe place to go in crisis is even more rare—a gap that technology could bridge.

Collaboration between technology companies, mental health professionals, educators, employers, policy makers, and the wider community is necessary. By prioritizing mental health and utilizing

Climate change is a concern for many respondents

Climate change appears to be a major concern across generations: in the McKinsey Health Institute 2022 Global Gen Z Survey, more than half of respondents across all age groups reported feeling highly distressed when asked about climate change, with females reporting a higher percentage compared with males. Many Gen Z respondents reported experiencing stress, sadness, anger, and frustration due to climate change and its related disasters. More than 50 percent of total respondents expressed fear and anxiety about the future, with Gen Z demonstrating greater concern than other generations. More than 50 percent of all respondents agree or strongly agree that "government leaders and companies have failed to take care of the planet."

This fear is not purely existential about the fate of the world or "eco-anxiety," but instead is often rooted in specific environmental risks that may impact their direct day-to-day livelihoods. When asked about which statements related to climate change resonated with them, 33 percent agree or strongly agree that climate change poses a threat to their family's physical or financial security. Individuals with self-reported poor mental health are more likely to feel affected by climate change, with 67 percent of Gen Z in this group stating that the future is "frightening" when looking at climate change, compared with 47 percent of Gen Z with neutral or good mental health.

Given the complex and multifaceted nature of mental health and climate change threats and related disruptions, there are no simple answers to the challenges they pose. There is an opportunity for further understanding of how experiences and attitudes around climate change may be influenced by political and ecological factors. However, in order to help young people navigate these issues, healthcare providers, educators, and parents can take a proactive approach by exploring these topics through targeted questioning and solution-oriented discussions. By encouraging young people to think critically about mental health and climate change, the focus can become empowerment and active role-playing to promote personal well-being, climate resilience, and the health of the planet.

Gen Z and spiritual health: Insights

According to the McKinsey Health Institute 2022 Global Gen Z survey, those between the ages of 18 and 24 report poorer spiritual health than older generations, with Gen Z respondents almost three times more likely than baby boomers to report poor or very poor spiritual health.

Spiritual health enables people to integrate meaning in their lives. Spiritually healthy people have a strong sense of purpose. While people who are experiencing poor mental health could have good spiritual health, or vice versa, Gen Z individuals who experienced poor mental health were five times more likely to report poor spiritual health than those with neutral or good mental health.

Responses varied widely by country, both in terms of overall ratings of spiritual health and in respondents' perceived importance of spiritual health. For example, there was a 48-point range across countries in respondents indicating that spiritual health was "extremely important" to them. While 8 percent of total respondents in the Netherlands said spiritual health was "extremely important" to them, 56 percent of total respondents in Brazil said the same. Respondents in higher-income countries were half as likely to indicate spiritual health is "extremely important" to them versus lower-middle-income countries (23 percent versus 43 percent).

Respondents in Africa and South America were most likely to report that spiritual health was extremely important to them (46 percent and 41 percent, respectively); respondents in Europe were least likely (18 percent).

Given these data, it's clear that spiritual health matters to young people around the world, and there may be important links to overall well-being. People seeking to support the mental health and psychological resilience of young people may want to inquire about how they are finding purpose in their homes, families, and at work.

technology in a positive way, young people are more likely to achieve and sustain better health. Other strategies that could be considered include using social media to build supportive online communities for affinity groups and promoting youth leaders to create and disseminate content that promotes mental health.[8] Researchers and companies can explore evidence-based strategies such as mental health promotion and mindfulness programs to mitigate the negative effects of social media and to help young people use social media as a platform for authentic self-expression.[9]

Social media and technology, while part of the broader dialogue around youth mental health, can be powerful tools in promoting well-being.

[8] Mizuko Ito, Candice Odgers, and Stephen Schueller, *Social media and youth wellbeing: What we know and where we could go*, Connected Learning Alliance, June 2020.
[9] Julia Brailovskaia and Jürgen Margraf, "Positive mental health and mindfulness as protective factors against addictive social media use during the COVID-19 outbreak," *PLOS One*, 2022, Volume 17, Number 11.

A "precision prevention" approach to talking with young people about the role of technology in their lives may help create a more informed, supportive, and healthful environment. By providing parents, educators, and healthcare professionals with these tools, they can become actively engaged in promoting the health of Gen Z and beyond. While addressing these issues may seem overwhelming, it is essential that stakeholders work together to help improve the mental health of young people.

MHI is an enduring, non-profit-generating global entity within McKinsey. MHI strives to catalyze actions across continents, sectors, and communities to achieve material improvements in health, empowering people to lead their best possible lives. MHI sees supporting youth mental health as essential to adding years to life and life to years.

If you would like to learn more about the McKinsey Health Institute (MHI) 2022 Global Gen Z survey and the additional data and insights the McKinsey Health Institute has from the survey, please submit an inquiry via the MHI "contact us" form. The McKinsey Health Institute, as a non-profit-generating entity of McKinsey, is creating avenues for further research that can catalyze action.

Erica Coe is a coleader at the McKinsey Health Institute and a partner in McKinsey's Atlanta office. **Kana Enomoto** is a coleader at the McKinsey Health Institute and a partner in the Washington, DC, office, where **Andrew Doy** is a consultant and **Cheryl Healy** is an associate partner.

The authors wish to thank Nicolas Abi-Chacra, Lea Arora, Victoria Bennett, Abby Bloomfield, Ulrike Deetjen, Alexandru Degeratu, Martin Dewhurst, Joseph Jung, Abhishek Mahajan, Roxanne Sabbag, Emma Summerton, Pooja Tatwawadi, and Oliver Walker for their contributions to this article. They also wish to thank McKinsey Health Institute (MHI) geographical leaders Alistair Carmichael, Andira Putri, and Shriya Sethi. They also wish to thank the European Society for Child and Adolescent Psychiatry (ESCAP) affiliates and Orygen for providing their local expertise and helping shape the MHI Global Gen Z Survey (2022). They also wish to thank Megan Jones Bell, Murali Doraiswamy, Sharon Hoover, Roberta Katz, Shekhar Saxena, and Anil Thapliyal for their contributions.

Age is just a number: How older adults view healthy aging

This article is a collaborative effort by Hemant Ahlawat, Anthony Darcovich, Martin Dewhurst, Ellen Feehan, Viktor Hediger, and Madeline Maud, representing views from the McKinsey Health Institute.

The results of a survey from the McKinsey Health Institute shed light on the health perceptions and priorities of people aged 55 and older.

When someone contemplates growing older, it's likely with a wish for physical and financial independence, joyful and engaging activities, and closeness with loved ones. Whether by playing pickleball or mah-jongg, working a part-time job, or running after grandchildren (or all of the above), the big question is how every older adult, no matter their country or socioeconomic status, can manifest what matters to them.

A new McKinsey Health Institute (MHI) survey of more than 21,000 older adults (defined as those aged 55 and older) across 21 countries finds that respondents largely agree about the importance of having purpose, managing stress, enjoying meaningful connections with others, and preserving independence.[1] Consistent with external literature, and building on MHI's previous work in this area, the analysis examined the intersection of many of those factors with respondents' subjective, or perceived, health and well-being across the dimensions of mental, physical, social, and spiritual health (see sidebar "Methodology").[2]

Among the results, unsurprisingly, is that older adults who have financial stability—no matter their country—are more likely than their peers to be able to adhere to healthy habits, including those that boost cognitive health.[3] And contrary to the perception that older adults are tech laggards compared with their younger peers, the results find widespread technology adoption, especially in smartphone use, among the older adult population.

But on other topics, including how respondents perceive their health across the four dimensions, how they want to engage in society, and how they view the best ways to stay healthy, responses vary widely. In particular, respondents in high-income economies (HIEs) aren't necessarily thriving more than their counterparts in upper-middle-income economies (UMIEs) and in low- and middle-income economies (LMIEs) are. For example, almost 20 percent of respondents in HIEs say they would like to work in their old age but aren't currently doing so. Respondents living in HIEs also describe substantially lower levels of societal participation[4] compared with their counterparts in other countries.

[1] The online survey was in the field from late December 2022 to February 2023 and garnered responses from more than 21,000 participants aged 55 and older across 21 countries.

[2] Martin Dewhurst, Katherine Linzer, Madeline Maud, and Christoph Sandler, "Living longer in better health: Six shifts needed for healthy aging," McKinsey Health Institute, November 11, 2022; Angus Deaton, Andrew Steptoe, and Arthur A. Stone, "Subjective wellbeing, health, and ageing," *Lancet*, February 2015, Volume 385, Number 9,968. The analysis approach is meant to provide a comprehensive picture of how older adults perceive their health, how their perceptions compare with objective measures of health, and what behaviors are most closely associated with their perceptions.

[3] Bishwajit Ghose, Rui Huang, and Shangfeng Tang, "Effect of financial stress on self-rereported health and quality of life among older adults in five developing countries: A cross sectional analysis of WHO-SAGE survey," *BMC Geriatrics*, August 2020, Volume 20, Number 1.

[4] Based on extensive literature review, we define "societal participation" as participating in at least one of the following activities: working, volunteering, pursuing education, and being active in community programs.

Respondents largely agree about the importance of having purpose, managing stress, enjoying meaningful connections with others, and preserving independence.

Methodology

To gain a better understanding of the health perceptions, preferences, and activities of older adults (those aged 55 and older) around the world, the McKinsey Health Institute conducted an internet-based survey between late December 2022 and February 2023, collecting information on about 1,000 older adults per country. For the participants unable to fill out the survey because of medical conditions or lack of internet access, we collected responses from a spouse, child, or child-in-law.

Within each country, we applied quotas and respondent weights to ensure that the final sample was representative for the entire country with respect to age, gender, and proportions of urban and rural location and tertiary education. We also used weights within each country to balance the sample, as much as possible, on respondents' self-reported health status. This design was to ensure that results in one country on some measures don't look better than those from another solely because a higher proportion of their respondents report health substantially above the average for their age cohort.

Considerations for cross-generational surveys

We asked about each participant's attitudes and behaviors only at the time of the survey. Therefore, when differences in average answers between age cohorts exist, we can't determine how much they result from different generations thinking differently versus people getting older and their preferences changing. It's possible that younger cohorts will eventually think and behave like older cohorts once they reach the same age.

Considerations for surveys conducted online

The survey was conducted online. Without proper guardrails, the survey would have been affected by substantial nonresponse bias, because individuals without reliable internet access couldn't have been part of the sample. This is why we asked spouses, children, and children-in-law to answer on behalf of participants without reliable internet access. We used the best information available to decide on the proportions of responses to come directly from participants and from somebody answering on behalf of an older adult. It is possible, however, that we have slightly under- or overcorrected.

Considerations for cross-country surveys

Substantial cultural differences are known to exist across countries, and they can affect how respondents interpret survey questions and answers, how they use the scales, how likely they are to agree with survey questions, and how likely they are to answer truthfully. For example, past McKinsey analysis has shown that, in general, survey respondents in India have a higher propensity to agree and to agree strongly with survey statements than respondents in most other countries do.

Although we relied on cultural experts to safeguard equivalence of meaning during translation across languages, some observed differences across countries may still be induced in the process. Country differences were computed as differences among country averages. Unless specified, we analyzed by taking a simple average across countries within a country income archetype and then took the simple average across archetypes in order to get an overall average.

In the insights that follow, we share findings around mental, physical, social, and spiritual health and what a healthy lifespan can mean in a world that is growing older. They build on MHI's previous work on six shifts needed for healthy aging, with the goal of reenvisioning perceptions of aging around capacity rather than chronological age.[5] They also support MHI's assertion that empowering individuals in optimizing health doesn't undermine the roles of systems, institutions, countries, or cities.[6] It's our hope that every stakeholder, from employers to local governments to healthcare providers, can see what older adults want, evaluate what's possible, and feel motivated to be a part of wide-scale aging transformation.

It's our hope that every stakeholder can see what older adults want, evaluate what's possible, and feel motivated to be a part of transformation.

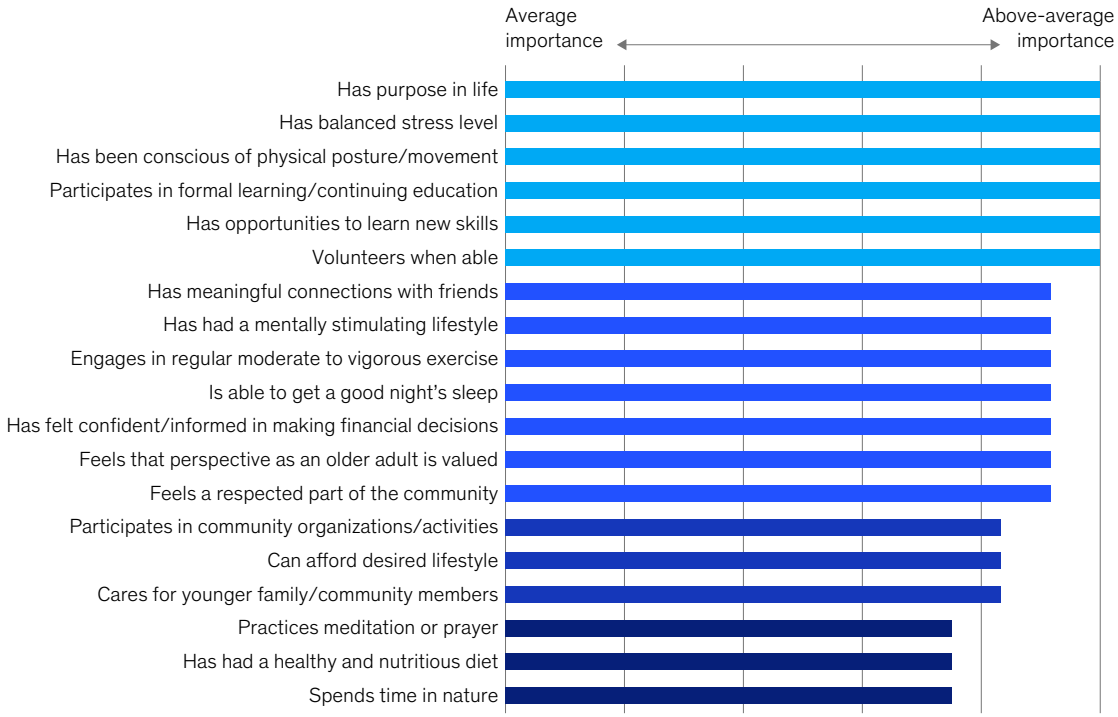
[5] For more, see "Living longer in better health," November 11, 2022.
[6] For more, see Lars Hartenstein and Tom Latkovic, "The secret to great health? Escaping the healthcare matrix," McKinsey Health Institute, December 20, 2022.

A dozen factors emerge as most closely associated with perceived health

MHI asked survey participants about 53 factors, ranging from societal participation to exercise, to assess what matters most to older adults and how those individual factors may affect health. The analysis reveals that purpose, stress, physical activity, lifelong learning, meaningful connections with others, and financial security are the factors most strongly associated with respondents' overall perceived health. While there are nuanced differences by country, overall, respondents in HIEs and UMIEs emphasize stress and financial decisions, while those in LMIEs highlight the importance of exercise and sleep. These factors often tie into how respondents perceive their mental, physical, social, and spiritual health.

Having purpose, managing stress, physical activity, lifelong learning, and interacting with others matter most to overall health.

Top factors of individual health (out of 53 factors tested),[1] relative importance index[2]



[1]Questions: When considering the entire course of your life, how much do you agree with the following statements? Today and moving forward, how much do you agree with the following statements?
[2]To understand the importance of individual factors of health, we calculated the correlations of each factor with each of the four health dimensions across countries in aggregate. We grouped these correlations in magnitude levels based on quartiles. Each factor was then assigned an index value, and these values were summed across dimensions to arrive at an overall relative importance index.
Source: McKinsey Global Healthy Aging Survey, 2023

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Mental and spiritual health are the most favorably rated dimensions

Overall, survey respondents' perceived health across all four dimensions declines with age. Physical health has the sharpest drop—38 percent—when looking at the average response, across all countries, between the youngest and oldest cohorts. For those aged 55 to 64, mental health tends to be the most positively rated dimension. For those aged 65 and older, spiritual health becomes the most positively rated dimension.

When examining economies and whether they affect health, the picture is mixed. On average, respondents in LMIEs report better average health than those in HIEs did. Yet respondents in HIEs report an increase in health across all dimensions from about age 55 to about age 79, which may be correlated to retirement.

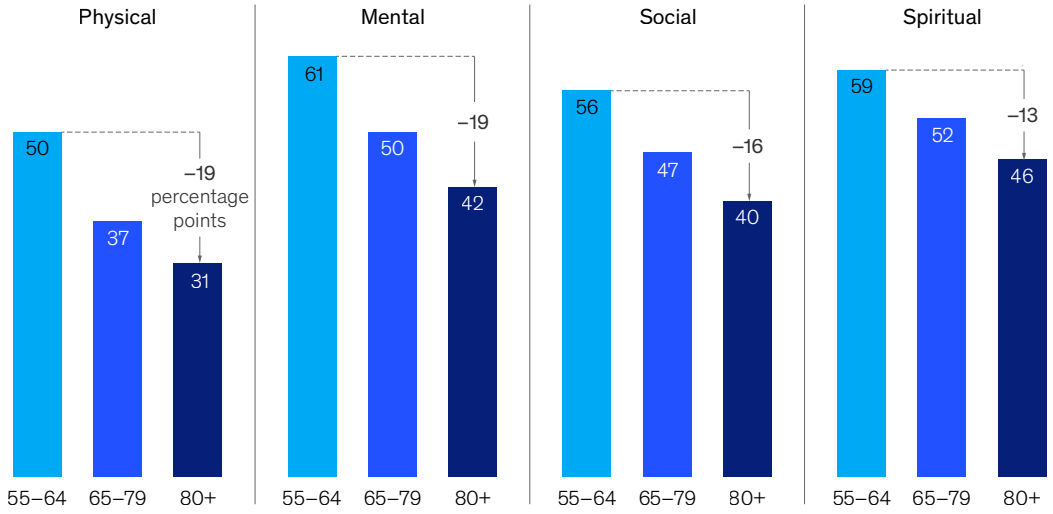
Of the countries represented in the survey, Australia and Japan were the only two where perceived mental, social, and spiritual health increased with age, with scores among those aged 80 and older higher than those of their counterparts aged between 55 and 64.

Respondents in China report the smallest declines in physical health, while those in Sweden report the smallest declines in mental and social health. Respondents in Egypt, Nigeria, and South Africa—the African countries represented in the survey—report the smallest declines in spiritual health.

Yet perceptions of health don't always connect to life expectancy.

Overall, perceived physical and mental health drops the most by age 80.

Perceived good or very good health, by dimension of health, % of respondents (n = 22,661)



Note: At the overall level, differences greater than 2% are statistically significant at a 95% confidence level. At the country-income-archetype level, differences greater than 5% are statistically significant at a 95% confidence level.
Source: McKinsey Health Institute Global Aging Survey (2023)

McKinsey & Company

Living longer may not mean better perceived health

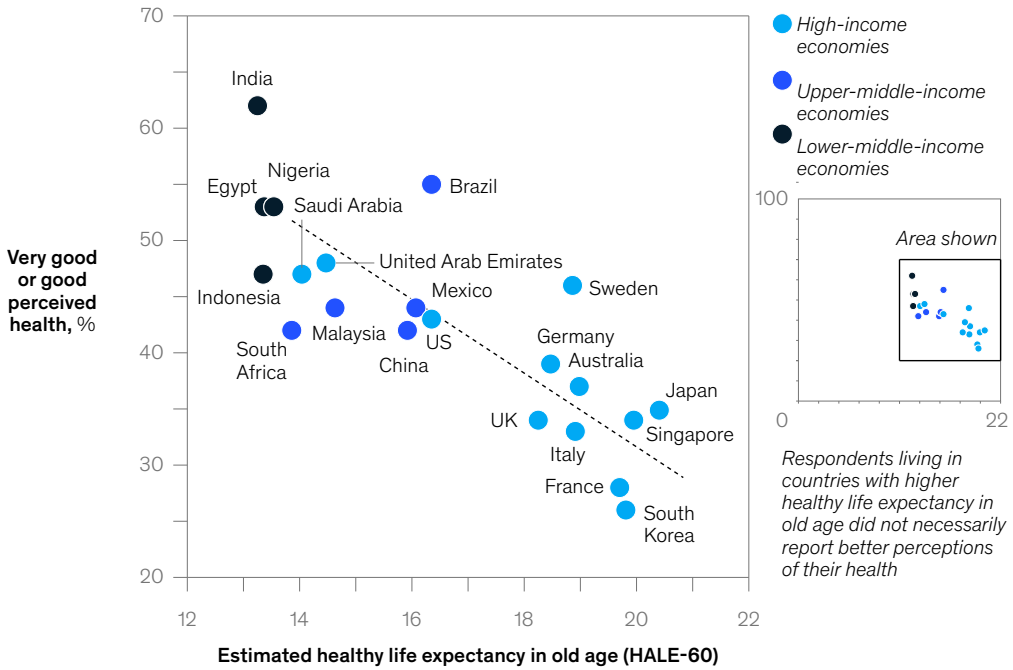
On average, older people can expect to have an additional 20 years of life expectancy compared with those in 1960.[7] But survey respondents living in countries with higher healthy life expectancy in old age (as measured by the WHO[8]) don't necessarily report better perceived health. What's more, those with chronic conditions don't necessarily report poor health. The report rates of perceived overall positive health status of respondents with the greatest disease burden are 27 percent, 40 percent, and 53 percent by those in HIEs, UMIEs, and LMIEs, respectively.

This reaffirms that health is much more than the absence or presence of disease and consists of multiple dimensions.

Across the 21 countries represented in the survey, Japan has the highest healthy life expectancy for those in old age, but the share of Japanese respondents reporting very good or good perceived health is among the lowest. In general, a lower share of HIE respondents reports very good or good perceived health compared with other economies. The exception is in Saudi Arabia and the United Arab Emirates, where respondents have relatively high perceptions of their health.

There is dissonance between perceived health and healthy life expectancy.

Perceived health and healthy life expectancy of older adults aged 65–79, by country,[1] (n = 21,022)



Note: To create comparable sample across countries, analysis was conducted on the 65–79 age cohort that was most likely no longer working and also of sufficient sample size (80+ sample size varied widely across countries).
[1]Question: How would you/older adult rate your/their health across each of the dimensions below? Very good/good health is the average of those self-reporting "very good" and "good" health across each of the four dimensions of health.
Source: 2021 population estimates (55+ and all ages), United Nations Department of Economic and Social Affairs, Population Division (2022); World Population Prospects 2022; McKinsey Global Healthy Aging Survey, 2023

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[7] World Bank Open Data, World Bank, accessed on May 10, 2023. For more, see "Living longer in better health," November 11, 2022.
[8] Measurement of "the average number of years in full health a person (usually at age 60) can expect to live based on current rates of ill-health and mortality." Global Health Observatory, WHO, updated on December 4, 2020.

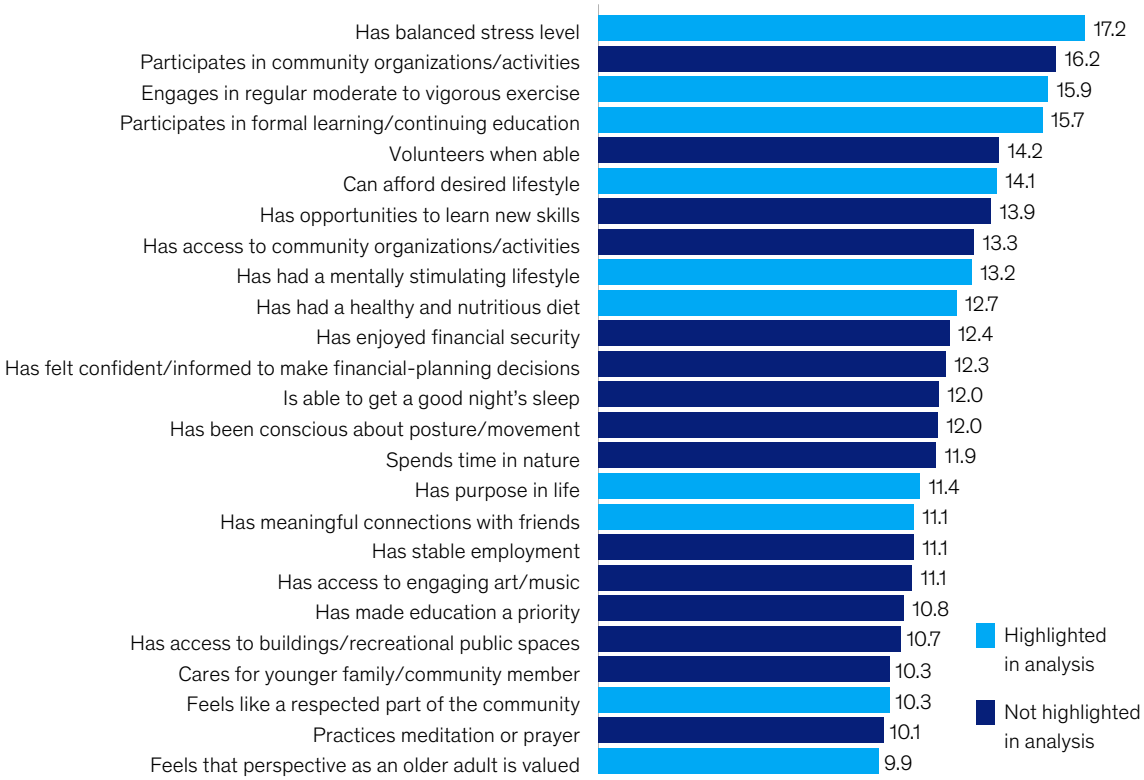
The factors with the greatest uplift broadly align with those identified as most important

In addition to looking at the factors that respondents report as most important to their health, our analysis looked at the factors with the greatest uplift.[9] We examined what would happen if everyone could achieve the same level of perceived health as those with the best reports of a specific factor. For example, managing stress has meaningful potential uplift. Among respondents aged 65 to 79, those who agree or strongly agree that they "manage their stress levels" have a 17-percentage-point uplift, on average, in their perceived overall health.

Feeling respected by one's community and feeling that one's perspective as an older adult is valued also result in substantial uplifts, with the greatest effect seen in respondents in HIEs—so much so that the difference between perceived health and

Addressing factors of health individually can have outsize impact on overall perceived health.

Average uplift in perceived health, by factor of health,[1] percentage-point uplift in very good/good health from baseline



Note: Uplift is calculated as the average of those self-reporting "very good" and "good" health across each of the four dimensions of health. To create comparable sample across countries, analysis was conducted on the 65–79 age cohort that was most likely no longer working and also of sufficient sample size (80+ sample size varied widely across countries).
[1]Question: How would you/older adult rate your/their health across each of the dimensions below? All uplifts are statistically significant at a 95% confidence level. Differences between uplifts greater than 4% are statistically significant at the 95% confidence level.
Source: McKinsey Global Healthy Aging Survey, 2023

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[9] "Uplift" is defined as the net-positive impact on overall health status when including only the survey participants who respond that they agree or strongly agree with the statement related to the specific factor compared with the average of all respondents. Uplifts are based on correlation, not causation. The factors that are deemed important and also result in substantive uplift are shown. Factors with insufficient sample size in numerous countries are excluded from this analysis.

life expectancy almost completely disappears. This supports the idea that reframing aging has the potential to alter how older adults perceive their own health.

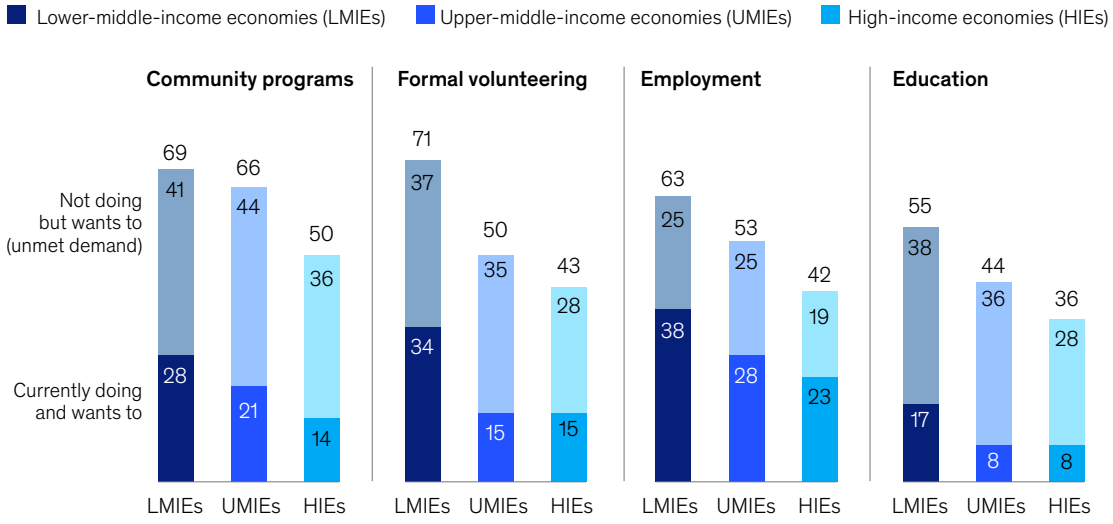
At first glance, there appears to be less potential uplift for respondents in LMIEs, but the picture is more complicated. Such respondents give a higher baseline rating across most factors at the onset compared with their peers. For example, among respondents in LMIEs, a sense of purpose is largely ubiquitous. So selecting for the population subset that rates purpose most favorably invariably includes almost the entire sample, leading to little room for uplift.

Older adults in high-income economies are active but less engaged than their peers

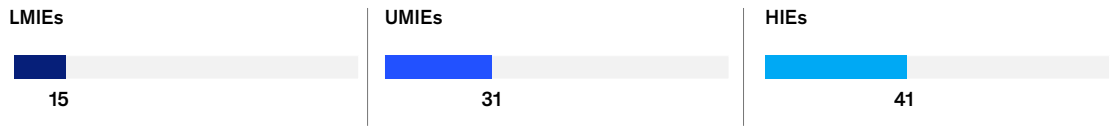
Across countries and incomes, employment is the most frequently reported societal-participation activity, followed by formal volunteering by respondents in LMIEs and community activities by respondents in HIEs and UMIEs. Most surprising: fewer than 60 percent of the respondents in HIEs report engaging in any type of societal participation. While reasons may vary, our research finds a meaningful opportunity around increasing societal participation, with up to 44 percent of older adults expressing a desire to engage in a new type of activity.

Older adults are socially active, and many want to do even more.

Engagement in and desire to engage in societal-participation activities,[1] % of respondents (n = 20,677)



Not participating in any activities,[1] % of respondents



Note: The total share that "wants to do an activity" plus the total share that "does not want to do an activity" (not shown) will equal 100%.
[1]Questions: Which of the following activities are you currently engaged in? Which of the following activities are you not currently engaged in?
Source: McKinsey Global Healthy Aging Survey, 2023

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Greatest perceived-health benefit is seen with volunteering and employment

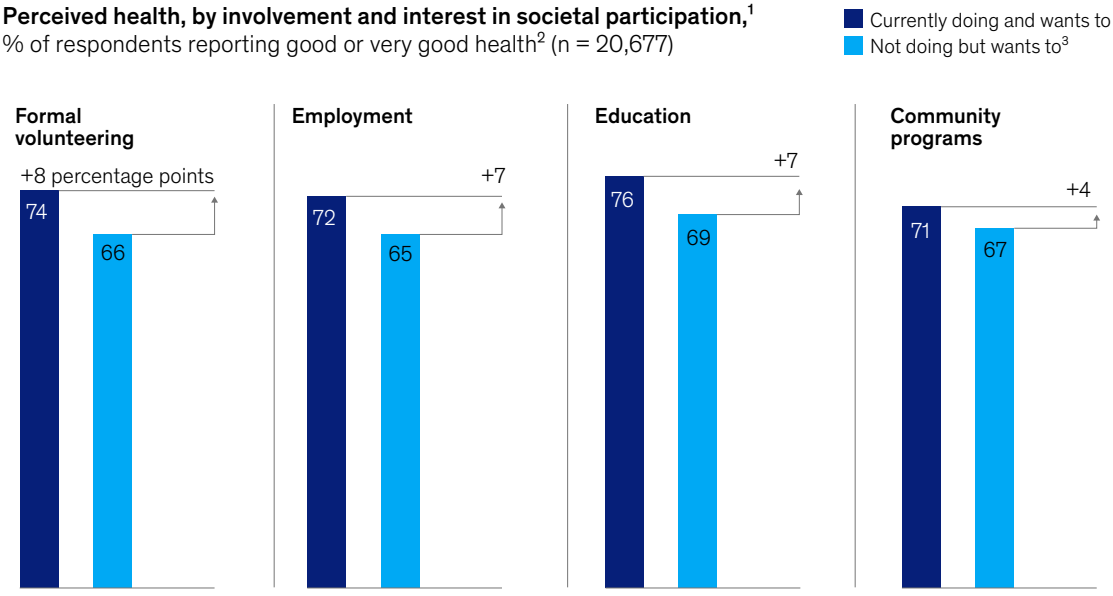
Participating pays off. Reports of overall health are better for survey respondents who engage in working, volunteering, education, and community activities than for those who don't. The greatest gain is seen with volunteering (eight percentage points, on average). When looking at country and country income archetypes, results vary, but in one example, the perceived benefit of volunteering correlates to increased wealth.

Declining health can be a barrier to overall societal participation but isn't a deal-breaker. Our data show that there is strong demand in this area even for those in less-than-ideal health. More than one-fifth of respondents in poor health report working, and the rates rise to 32 percent and 44 percent for respondents in average and good health, respectively.

There is an opportunity to both boost older adults' participation in society and benefit society overall. While it's intuitive to connect more economic impact with employment, this analysis also indicates that older adults who volunteer, participate in community activities, or further their education are potentially more likely to report better health, reducing their healthcare costs in turn (see sidebar "Isolation is complex").

Societal participation aligns with better perceived health.

Perceived health, by involvement and interest in societal participation,[1]
% of respondents reporting good or very good health[2] (n = 20,677)



[1]Questions: Which of the following activities are you currently engaged in? Which of the following activities are you not currently engaged in? How would you/older adult rate your/their health across each of the dimensions below?
[2]Simple average of self-reported health across each dimension. Excludes participants with low health. Differences greater than 3.5% are statistically significant at a 95% confidence level.
[3]Unmet demand.
Source: McKinsey Global Healthy Aging Survey, 2023

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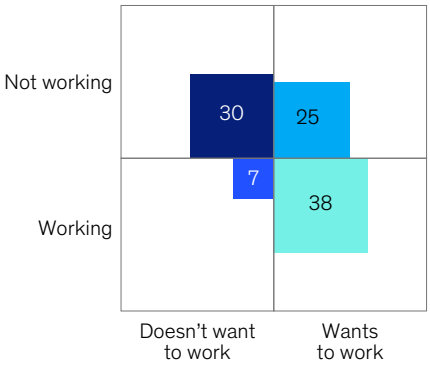
Many older adults who wish to work are unable to find a job

While the desire to work tends to decline with age—to 38 percent for respondents aged 80 and older, from more than two-thirds of those aged 55 to 64—a sizeable share of older adults report wanting to work. When evaluating the associated economic implications, there is the potential for $5 trillion in incremental annual GDP in HIEs. Across economies,

Older adults work and want to work in large numbers for reasons beyond just financial.

Employment preferences and status across lower-middle-income economies,[1] % of respondents (n = 3,927)



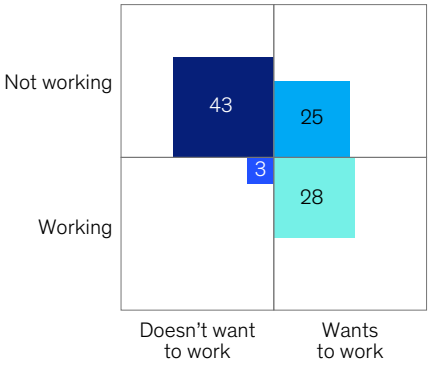
Top 3 barriers cited among those not working but wanting to

- Lack of attractive opportunities
- Difficulty landing a job
- Societal barriers (eg, mandatory retirement policies, cultural norms)

Top 3 motivations cited among those wanting to work and doing so

- Personal fulfillment
- Financial reasons
- Health reasons

Employment preferences and status across upper-middle-income economies,[1] % of respondents (n = 5,003)



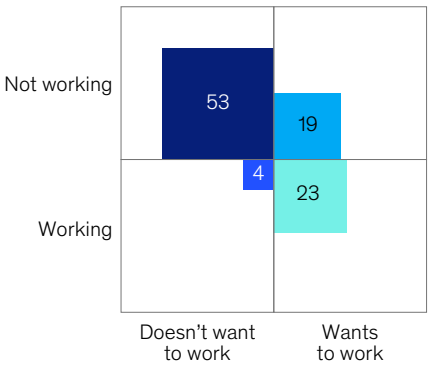
Top 3 barriers cited among those not working but wanting to

- Difficulty landing a job
- Lack of attractive opportunities
- Societal barriers (eg, mandatory retirement policies, cultural norms)

Top 3 motivations cited among those wanting to work and doing so

- Financial reasons
- Personal fulfillment
- Health reasons

Employment preferences and status across high-income economies,[1] % of respondents (n = 11,747)



Top 3 barriers cited among those not working but wanting to

- Difficulty landing a job
- Lack of attractive opportunities
- Skills aren't in demand

Top 3 motivations cited among those wanting to work and doing so

- Financial reasons
- Personal fulfillment
- Health reasons

Note: Differences greater than 3% are significant at a 90% confidence level. Differences greater than 3.6% are statistically significant at a 95% confidence level.
[1]Question: Which of the following activities are you currently engaged in?
Source: McKinsey Global Healthy Aging Survey, 2023

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19 to 25 percent of survey respondents want to work but aren't doing so. They most often cite a lack of attractive opportunities and difficulty in landing jobs as their primary barriers.

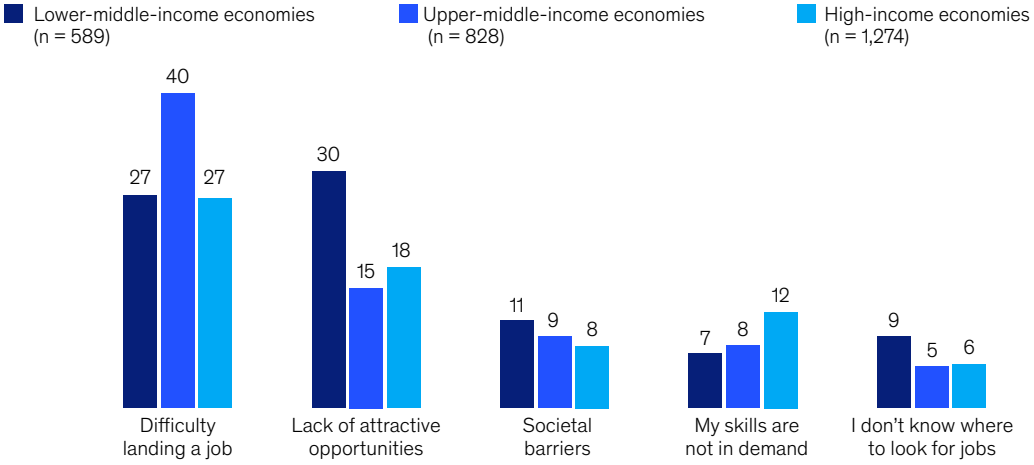
Challenges with finding a job and attractive opportunities

Roughly three in ten respondents in LMIEs and HIEs cite "difficulty getting a job" as their top barrier to employment.[10] Within countries, the range of respondents citing this as the top challenge is 25 (in Malaysia) to 55 percent (in Mexico).

Many respondents across economies name a "lack of opportunities" as a barrier to working. However, more respondents in LMIEs than in other economies also say "not knowing where to look for jobs" is a barrier.[11] Could technology help with that challenge?

Difficulty landing a job and lack of attractive opportunities are greatest barriers to employment.

Barriers to employment, by country income archetype,[1] % of respondents[2]



Note: Differences greater than 4.5% are significant at a 90% confidence level.
[1]Question: Which of the following options describe the barriers you encounter to find work?
[2]Percentage of respondents intending to become employed in the next year reporting as top barrier to employment.
Source: McKinsey Global Healthy Aging Survey, 2023

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[10]For more, see *Achieving equitable healthy aging in low- and middle-income countries: The Aging Readiness & Competitiveness Report 4.0*, a joint report from AARP and Economic Impact, 2022.
[11] A further examination on the barriers and opportunities to societal participation will be published in summer 2023.

Debunking the myth about older adults and technology

The vast majority of survey respondents aged 55 to 64 use a smartphone; the percentage drops almost in half for residents aged 80 and older. When looking at countries, usage also varies widely. Three-fourths of those aged 80 and older in China have a smartphone, compared with less than one-third of that cohort in France.

While more than 40 percent of those oldest respondents say they want to use a smartphone, and 25 percent say they want to use a laptop or tablet, there is a share uninterested in using technology. Roughly one in five respondents aged 80 and over are saying no to all technology products in their life.

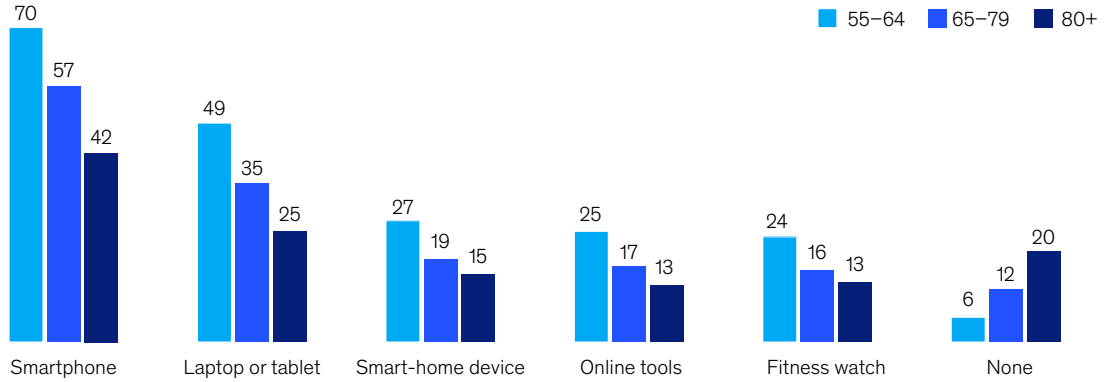
Within countries, that share ranges from more than 40 percent (in Brazil and France) to under 10 percent in China, India, Nigeria, Saudi Arabia, and Sweden.

These differences reflect a variety of factors, from access to interest to lifelong use. Respondents say the biggest barriers to technology adoption are around cost and a lack of knowledge, with the former more important for younger cohorts and the latter more important for older cohorts. Other barriers include lack of availability, lack of trust, and poor internet.

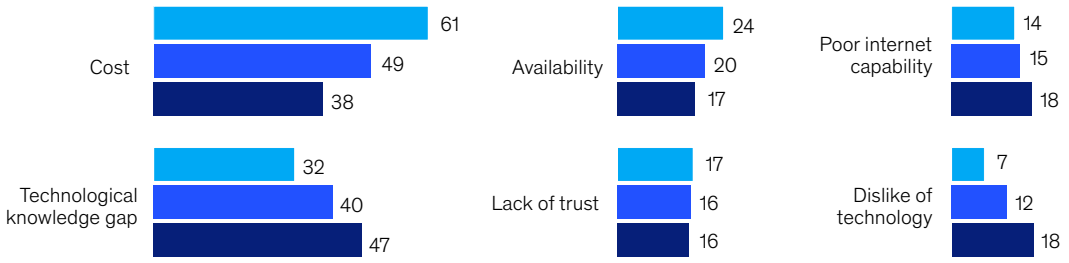
To address these issues, it's possible that lower costs and more education could help the oldest respondents. But given how the youngest cohort of older adults is invested in technology, there will be

Overcoming the knowledge gap is the key to greater technology adoption.

Most desired technology products,[1] by age, % of respondents (n = 21,022)



Barriers to use of technology,[2] by age, % of respondents



Note: Differences between uplifts greater than 2.5% are statistically significant at a 95% confidence level.
[1]Question: Which tools and devices would you want to use in your life? Only includes technology products where at least 20% of respondents within one age cohort expressed a desire for specific type of technology product. All uplifts are statistically significant at a 95% confidence level.
[2]Question: What are the barriers to using these tools and devices in your life?
Source: McKinsey Global Healthy Aging Survey, 2023

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a naturally higher penetration of use among older adults over time. In other words, stakeholders are wise to start dismantling the idea that elderly people don't want, know how to use, or have a smartphone.

Economic inequality poses challenges to health

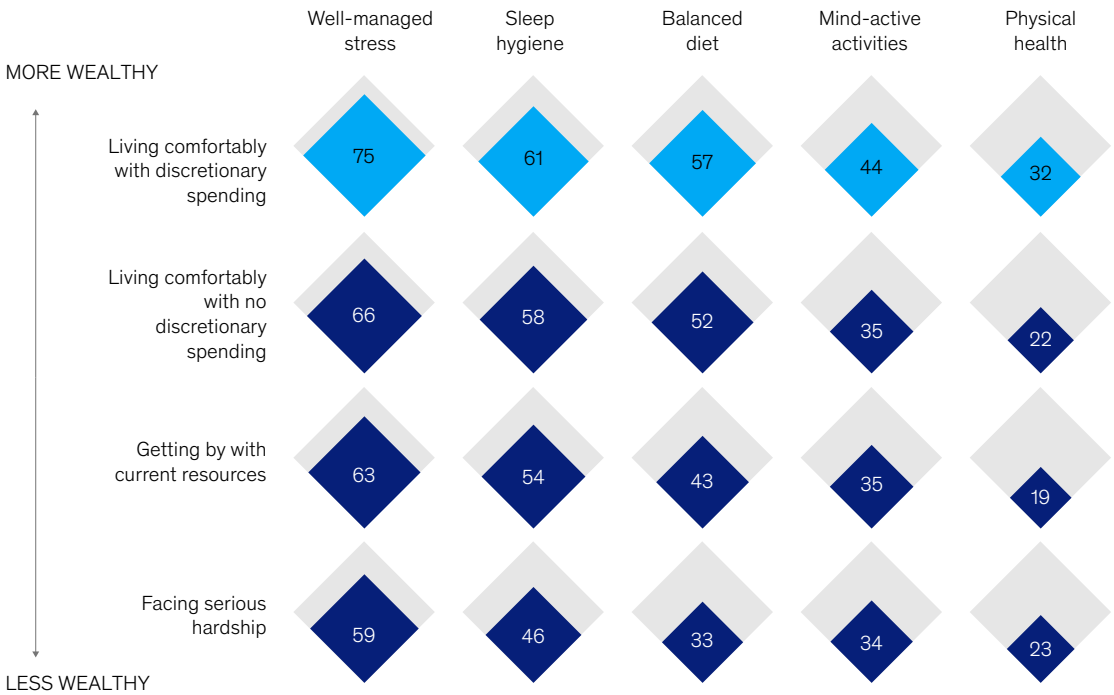
MHI also tested older-adult adherence to behaviors shown to affect either the development or the progression of dementia.[12] Our research indicates that older adults need more support to follow healthy behaviors. Managing stress is the only behavior in which a majority of respondents across financial-situation cohorts report surpassing the minimum generally acceptable benchmark.

Respondents least adhere to the behavior of "taking care of one's physical health." Some of this could be attributed to financial situation; those who report living comfortably, with discretionary spending, are 73 percent more likely than their peers to eat healthy foods and subscribe to a balanced diet. Yet even for those who are financially stable, many are still avoiding best health practices.

Behavior dissonance isn't a problem unique to older adults; there are fathomless actions that individuals know are good for them yet don't do. However, the survey results are worrisome when contemplating the rising rate of cognitive decline. This ties into the need to address global poverty's impact on healthy habits.

Economic inequality aligns with poorer adherence to healthy brain habits.

Participation in healthy brain habits, by financial-situation cohort,[1] % of respondents (n = 21,022)



Note: Differences greater than 2% are statistically significant at a 90% confidence level. Differences greater than 2.5% are statistically significant at a 95% confidence level. Benchmarks based on best practice matching from academic-literature search to standardized scale used in survey: I keep stress at a manageable level (at least weekly); I take care of my physical health; I keep my mind active with meaningful activities; I eat healthy foods and subscribe to a balanced diet; I make an effort to have good sleep hygiene (at least a few times per week).
[1]Question: To what extent do you/does this person follow the below lifestyle behaviors?
Source: McKinsey Global Healthy Aging Survey, 2023

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[12] This was based on adjusted selections from the "Dementia prevention, intervention, and care" report by the *Lancet* Commission.

Older adults want to stay in their homes, but that's not always possible

Not surprisingly, most survey respondents want to stay in their homes as they age. However, living at home isn't without challenges for older adults. For example, those living alone may be at risk of having a sudden medical emergency without the ability to access help or a potentially life-threatening household problem (such as forgetting to turn off the stove).

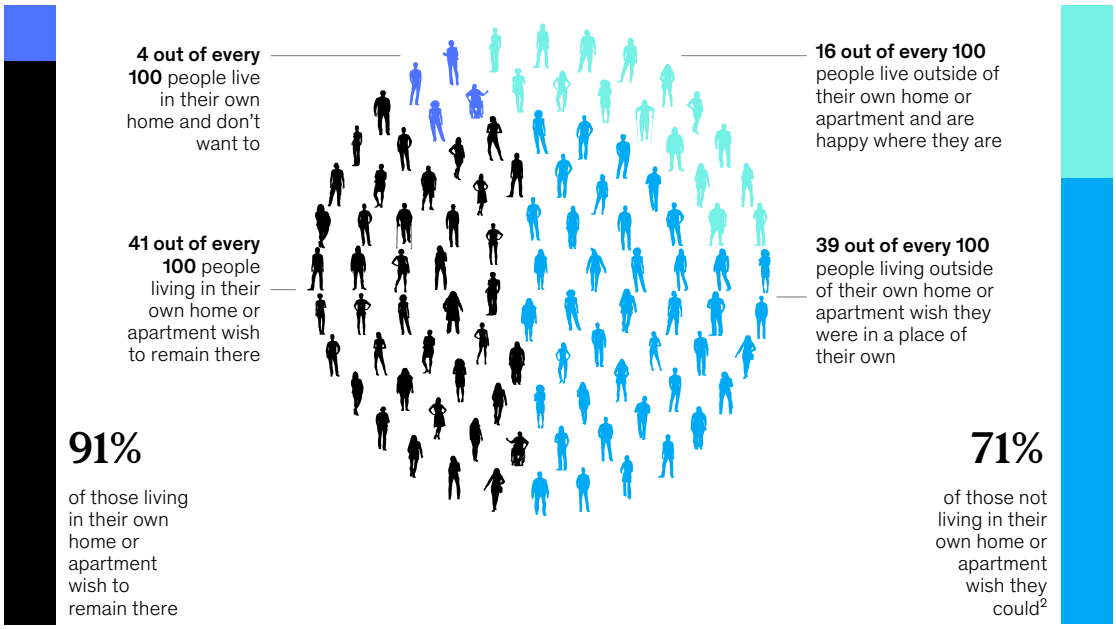
Employing external supports (for example, a laundry service), using technology (such as remote monitoring), and embarking on home renovations (such as a ground-floor bedroom and ramps) could potentially let older adults stay in their homes longer.[13] The discussions about how to plan for aging should start early, preferably in midlife (see sidebar "Living intergenerationally might benefit one's health").

The desire to remain independent can be a barrier to accessing care

All respondents report at least one unmet care need. Participants in UMIEs and HIEs report the desire to remain independent as the main barrier to accessing care. While that's also a concern for those in LMIEs, they report access to care and affordability as more pressing. These trends persist across gender and age cohorts.

Eighty percent of older adults want to live in their own home, but not all are able.

Living situation and preferences,[1] share of respondents (n = 21,022)



[1]Questions: Where do you currently live? What is your most preferred living situation as you age?
[2]Includes respondents living in a friend's or relative's home/apartment, in a minimum-support unit/room, in a residential aged-care or memory care facility, or all other living situations not enumerated.
Source: McKinsey Global Healthy Aging Survey, 2023

McKinsey & Company

[13] For more, see Michele Lerner, "More older people are opting to age in their homes. Here's how they're doing it," *Washingtonian*, March 13, 2023.

As populations age and dependency ratios increase, health stakeholders will need to ensure not only access to care and its quality but also responsiveness of available care to older adults' desire to remain independent. This could include increasing the focus on in-home services and other community-based types of care. In this area, Norway is a lighthouse for its use of technology, such as care coordination platforms and digital-key systems, and Singapore is a notable example of intergenerational care tied to health.[14]

In upper-middle-income and high-income economies, the desire for independence trumps having care needs met.

Barriers to the delivery of care[1] and population reporting unmet care needs, by age and country income archetype,[2] % of respondents (n = 9,193)

Note: Differences greater than 4% are statistically significant at a 90% confidence level. Differences greater than 5% are statistically significant at a 95% confidence level.
[1]Question: What are the biggest challenges you face in getting support or assistance? Please select all that apply. Self-assessed challenges reported by those already receiving at least one type of care.
[2]Question: Which of the following areas would you like to receive support or assistance with but do not currently? Please select all that apply.
Source: McKinsey Global Healthy Aging Survey, 2023

McKinsey & Company

[14] For more, see *The global roadmap for healthy longevity*, National Academy of Medicine, June 3, 2022.

Aging well isn't only possible: it's attainable. But to make this a reality for a rapidly aging population, global stakeholders should consider not only how to boost the number of years in a life but also how to enable healthy life in those years.

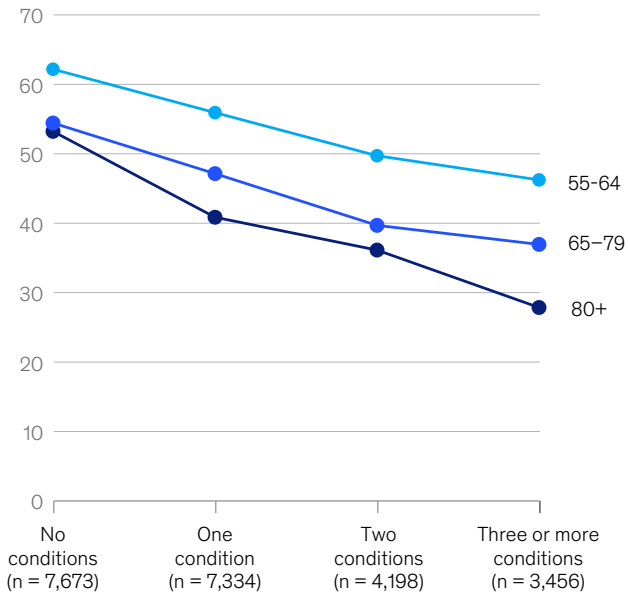
Some of this starts with reexamining assumptions. MHI's previous research found that many older adults report good overall health as they age, even as their physical health declines.[15] The current survey results support that research. Even among those facing the greatest disease burden, up to 46 percent report good overall health.

And when surveyed older adults cite lower physical-health scores, it's notable that the rates of the other dimensions (mental, social, and spiritual) decline less rapidly—or even rise, in some countries—with older age. For example, in Japan, those aged 65 to 79 report the highest mental-, physical-, social-, and spiritual-health scores. One explanation for this could be that the other dimensions act as a buffer, protecting or mitigating the decline of people's perception of their overall health despite a decline in their physical capabilities.

The extent to which other aspects of health could compensate for the decline in physical health, and balance people's view of their overall health, is a topic for further research. As we consider actions to add life to years, part of any solution will need to focus on what drives people to take action to stay in good health. Purpose and meaningful connections with others are critical contributors to good health, as our research indicates.

Respondents with chronic conditions do not necessarily see themselves as being in poor health.

Perceived very good or good health, by age, % of respondents by number of chronic health conditions[1] (n = 22,661)



[1]Arthritis, cancer, cardiovascular diseases (heart disease); cognitive diseases (dementia, Alzheimer's), diabetes and kidney diseases; high cholesterol; hypertension; chronic mental illness (eg, depression).
Source: McKinsey Global Healthy Aging Survey, 2023

McKinsey & Company

[15] Clément Desmouceaux, Martin Dewhurst, Daphné Maurel, and Lorenzo Pautasso, "In sickness and in health: How health is perceived around the world," McKinsey Health Institute, July 21, 2022.

Isolation is complex

No one wants to feel alone. Consistent with existing research on social isolation's harm,[1] our analysis of responses from older adults finds that isolation is a wide-ranging problem. Globally, 10 to 20 percent of respondents report feeling isolated.

Additionally, we find that more income doesn't necessarily help in this area. While an average of 12 percent of respondents in low- and middle-income economies report isolation, the share jumps to 19 percent in high-income economies.

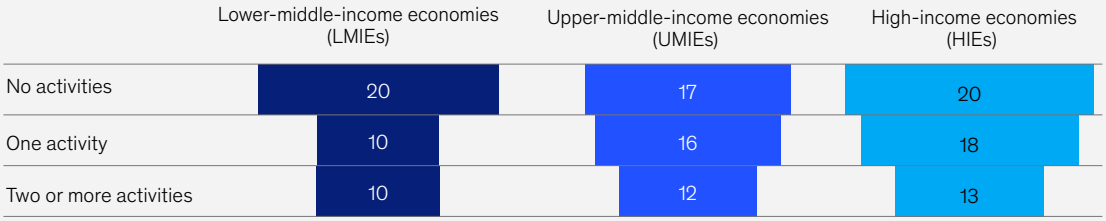
What potentially helps is when older adults can participate in society. In the survey, higher societal-participation[2] rates correlate to decreased isolation rates: by one-third in upper-middle-income economies and up to one-half in low- and middle-income economies. How much adults benefit from the activities varies by country, potentially reflecting different structures for societal participation and perceptions of what isolation means to an individual (exhibit).

In two countries represented in the survey, India and the United States, jumping into societal activities seems to have a particularly large impact. The reported isolation rate is 8 percent for respondents in India participating in two or more activities, increasing to 33 percent for those who don't participate in any activities. In the United States, the increase is from 9 to 25 percent. Comparatively, respondents in the United Kingdom appear to benefit less from societal participation. For UK respondents reporting no participation in social activities, the isolation rate is 19 percent, which drops minimally for those who report participation in two or more activities.

Exhibit

Participation in societal activities aligns with lower self-reported isolation.

Self-reported isolation, by societal-participation levels,[1] % of respondents (n = 20,677)



[1]Saudi Arabia and United Arab Emirates excluded from HIEs in this analysis, as they show patterns closer to UMIEs and LMIEs in the topics considered, likely due to largely expatriate and migrant worker populations.
Source: McKinsey Global Healthy Aging Survey, 2023

McKinsey & Company

[1] John T. Cacioppo and Stephanie Cacioppo, "Older adults reporting social isolation or loneliness show poorer cognitive function 4 years later," *Evidence-Based Nursing*, April 2014, Volume 17, Number 2.
[2] Based on extensive literature review, we define "societal participation" as participating in at least one of the following activities: working, volunteering, pursuing education, and being active in community programs.

Living intergenerationally might benefit one's health

Good news for those planning to move in with their children: as noted in previous research, older adults often benefit when they can live in intergenerational households.[1] As part of our research in healthy aging, we looked at survey results for older people living intergenerationally (defined in our study as those living with their adult children). Respondents in that cohort who are retired and have low levels of care needs tend to report being in better or much better than average health across dimensions compared with those not living with their children or spouse and children.

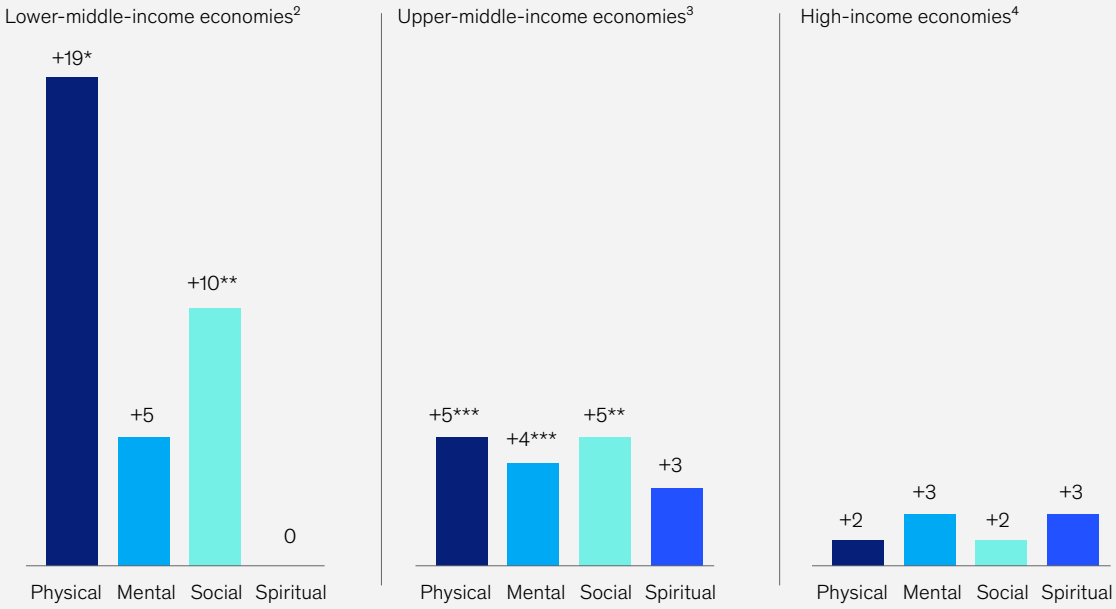
This trend varies across economy archetypes, with the greatest benefits, especially related to physical and social health, in respondents in low- and middle-income economies (exhibit). Moderate benefit is seen across all four health dimensions (mental, physical, social, and spiritual) by respondents in upper-middle-income economies. For respondents in high-income economies, those living intergenerationally report very little benefit from intergenerational living. In some countries (such as the United States), stigma against intergenerational living may contribute to an observed decline in mental health.

This research adds to an important body of evidence pointing toward the benefits of older people living with family, especially after retirement. Coupled with the trend away from extended- or nuclear-family living, this evidence suggests an opportunity to create intentional, age-inclusive communities where older adults can interact with younger generations—whether family or otherwise—in their daily lives.

Exhibit

In lower-middle-income economies and upper-middle-income economies, older adults living with their adult children report better health.

Perceived health of older adults living intergenerationally,[1] percentage-point increase



[1]Questions: Which of the following areas do you receive assistance with currently? Which of the following areas would you like to receive assistance with but do not currently? (Respondents who indicated they receive/desire to receive care in neither clinical support nor personal support rated "low"; either clinical or personal support rated "medium"; both clinical and personal support rated "high.") This analysis includes only those who have low-intensity care, defined as living with either their children only or with their spouse and children.
[2]Intergenerational (n = 170), nonintergenerational (n = 191).
[3]Intergenerational (n = 333), nonintergenerational (n = 566).
[4]Intergenerational (n = 479), nonintergenerational (n = 2,407).
*Statistically significant at a 95% confidence level. **Statistically significant at a 90% confidence level. ***Statistically significant at an 80% confidence level.
Source: McKinsey Global Healthy Aging Survey, 2023

McKinsey & Company

[1] Faizan Bhatia and Raiya Suleman, "Intergenerational housing as a model for improving older-adult health," *BC Medical Journal*, May 2021, Volume 63, Number 4.

Many older adults engage in activities for a variety of reasons, from staying healthy to being connected to their communities and, for some, pursuing financial gain.

And the underlying reasons for creating those connections and the definition of purpose vary. For example, our research on societal participation highlights the point that many older adults engage in activities for a variety of reasons, from staying healthy to being connected to their communities and, for some, pursuing financial gain. The motivations are multifaceted, but providing opportunities to fulfil those motivations must be a critical priority for societies.

Too often, society and individuals accept health declines as inevitable—the passing of time leading to physical deterioration. An important objective for many societies could be to ask "What would it take for more than half of people aged 80 and older to report good health over the next decade? What would it take to expand what it means to be in good health at ages 60, 70, 80, 90, and beyond?" For example, in forthcoming work, MHI will explore how a healthy city framework ties into older adults' abilities to stay active, access care, and keep connected.

Healthy aging also starts with individual actions, such as a person following behaviors proven to improve health, supported by an environment that makes them accessible to all. It's a lifelong journey, and it's never too late to set out on the path to becoming well aged.

If you would like to learn more about the McKinsey Health Institute 2023 Global Healthy Aging Survey and the additional data and insights MHI has from the survey, please submit an inquiry via the MHI "contact us" form. The McKinsey Health Institute, as a non-profit-generating entity of McKinsey, is creating avenues for further research that can catalyze action.

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The missing billion: Lack of disability data impedes healthcare equity

by Ahmed Osman, Sunny Sun, Phyllis Heydt, and Hannah Kuper

Addressing the absence of health data on people with disabilities is the essential first step health systems and policy makers can take to reduce care inequity and improve outcomes for this population.

Around the world, 1.3 billion people, or 16 percent of the population, are living with significant disabilities, according to the World Health Organization (WHO).[1] By and large, these individuals experience more barriers to accessing healthcare than the general population (see sidebar "Defining 'disability' and effects on care access and outcomes"). As a result, the United Nations' goal of "ensuring healthy lives and promoting well-being for all at all ages" will be very difficult to achieve.[2]

People with disabilities have a right to add years to their lives and life to their years through better health.[3] Closing health outcome gaps between populations with and without disabilities—in all dimensions of health (physical, social, mental, and spiritual)—calls, first and foremost, for good data. However, there are sizable and persistent gaps in health data with respect to people with disabilities.[4] In a 2023 review of data sets across 188 countries, 63 had no data sets with functional-difficulty questions[5] between 2009 and 2022.[6] As described in the McKinsey Health Institute's (MHI) six shifts to reach the full potential of human health,[7] better data is needed to do the following:

- raise awareness of the scale and nature of disparities in health outcomes; measurement is foundational to improvement
- determine, and build awareness of, the benefits of improving health equity and outcomes for people with disabilities[8]
- identify and quantify the healthcare access barriers experienced by people with disabilities
- determine ways to close the health outcome gap by using data to inform and scale "what works" given that interventions often do not translate into action[9]
- establish a baseline with standardized measurements, set targets, and monitor the progress of interventions

MHI is working with the Missing Billion Initiative to address health system challenges and close this gap in health data and equity (see sidebar "About the Missing Billion Initiative and the McKinsey Health Institute").[10] In this first report, we explore how a lack of health data exacerbates the challenges of meeting the needs of people with disabilities. We also share analysis of the maturity levels of different countries with respect to data collection and usage,

[1] "Disability," WHO, accessed August 22, 2023.
[2] "Goal 3: Ensure healthy lives and promote well-being for all at all ages," Sustainable Development Goals, United Nations, accessed August 22, 2023.
[3] For more, see "McKinsey Health Institute," McKinsey, accessed August 22, 2023.
[4] *Adding years to life and life to years*, McKinsey Health Institute, March 29, 2022.
[5] Functional-difficulty questions assess difficulty in performing basic everyday tasks or more complex tasks needed for independent living.
[6] J. Hanass-Hancock et al., *The disability data report*, Disability Data Initiative and Fordham Research Consortium on Disability, 2023.
[7] *Adding years to life*, March 29, 2022.
[8] "Equity and Health," McKinsey Health Institute, accessed August 22, 2023.
[9] "Scale what works: The benefits of proven health interventions," McKinsey Health Institute, March 29, 2022.
[10] WHO defines health equity as "the absence of unfair and avoidable or remediable differences in health among population groups defined socially, economically, demographically, or geographically." See "Health equity," WHO, accessed August 22, 2023.

Defining 'disability' and effects on care access and outcomes

There are many types and categorizations of disabilities. According to the World Health Organization, disabilities result from the interactions between individuals with an impairment and personal and environmental factors, including negative attitudes, inaccessible transportation and public buildings, and limited social support.[1] Impairments can be physical, mental or psychosocial, intellectual, and sensory.

Additionally, people with disabilities often have greater care needs, in part because they develop health conditions due to their impairments or underlying health (for example, immobility caused by a stroke could result in bedsores). They also are more likely to belong to cohorts with greater healthcare needs. For example, people with disabilities are older, on average, than the general population[2]; therefore, they are more likely to have chronic diseases or other conditions that necessitate more care. The prevalence of disabilities is also higher in women, who face greater barriers accessing health services in some settings,[3] and the poor, who experience overall worse health as a result.[4]

On average, people with disabilities have substantially worse health outcomes, with a mortality rate twice as high as the general population's and a life expectancy that is ten to 20 years shorter.[5] This is due in part to disparities across the whole patient journey (for example, the ability to access and pay for services). In a survey conducted in five countries (Brazil, France, Japan, the United Kingdom, and the United States), people with a disability also reported greater distrust of the healthcare system than the general population (73 percent compared with 56 percent). Among ethnic minorities and people of color who are also disabled, the disparity is even higher (82 percent compared with 52 percent who are neither).[6]

[1] "Disability," World Health Organization, accessed August 22, 2023.
[2] "Ageing and disability," UN Department of Economic and Social Affairs, accessed August 22, 2023.
[3] Lena J.P. Cardoso, Anna Gassman-Pines, and Nathan A. Boucher, "Insurance barriers, gendering, and access: Interviews with Central North Carolinian women about their health care experiences," *Permanente Journal*, 2021, Volume 25, Number 2.
[4] "Realizing the Sustainable Development Goals by, for and with persons with disabilities: Ending poverty and hunger for all persons with disabilities (Goals 1 and 2)," UN Department of Economic and Social Affairs, 2019.
[5] *Reimagining health systems that expect, accept and connect 1 billion people with disabilities*, Missing Billion Initiative and Clinton Health Access Initiative, 2022; "People with learning disabilities had higher death rate from COVID-19," UK Health Security Agency, November 12, 2020; Maarten Cuypers et al., "All-cause and cause-specific mortality among people with and without intellectual disabilities during the COVID-19 pandemic in the Netherlands: A population-based cohort study," *Lancet*, May 2023, Volume 8, Number 5.
[6] Sanofi survey on trust in healthcare system of 11,500 people in five countries (Brazil, France, Japan, the United Kingdom, and the United States); for more, see "A million conversations: How we're bridging the healthcare 'trust gap' with marginalized communities," Sanofi, April 3, 2022.

and we outline actions stakeholders could take to close the health data equity gap.

Barriers to healthcare access

People with disabilities often experience more difficulty accessing healthcare than the population at large, from perceiving a need to receiving treatment and follow-up care (Exhibit 1).[11]

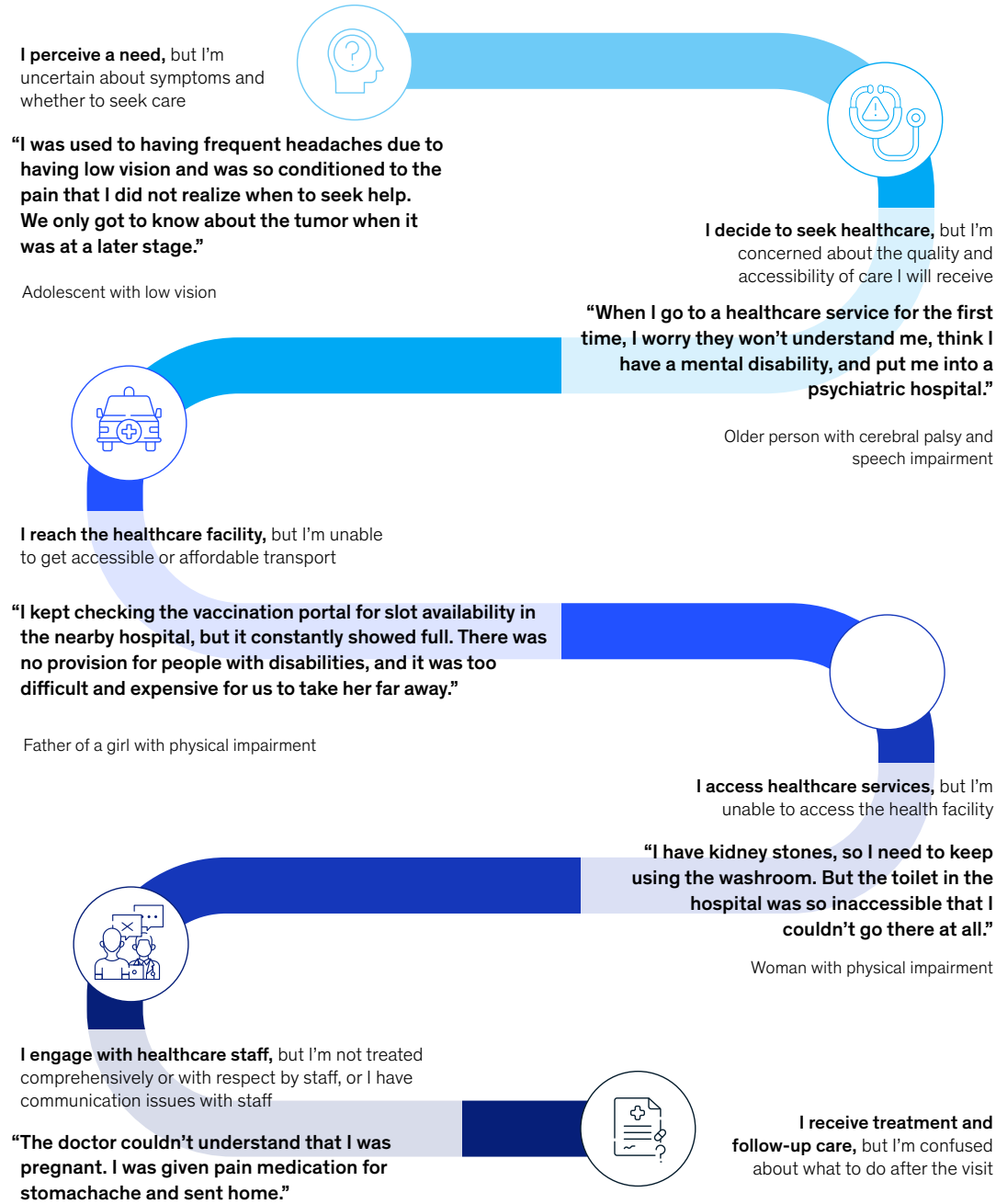
This health equity gap persists in part because some healthcare professionals feel they lack the training and confidence to communicate with and serve people with disabilities. In a 2019–20 survey of 714 practicing US physicians, only about two in five said they were very confident in their ability to provide equal-quality care to patients with disabilities, and only three in five strongly agreed that they welcome disabled patients into their practices.[12]

Perceived negative attitudes from healthcare workers can have tangible adverse effects on the experience of patients with disabilities. For example, the care team for a visually impaired woman with HIV in South Africa assumed she didn't have sex or need family planning.[13] A man with a hearing impairment in Kenya sat in the waiting room until the office closed because he missed audio notifications that it was his turn to see the doctor.[14]

[11] *Reimagining health systems*, 2022.
[12] Lisa I. Iezzoni et al., "Physicians' perceptions of people with disability and their health care," *Health Affairs*, February 2021, Volume 40, Number 2.
[13] Phyllis Heydt and Hannah Kuper, *The Missing Billion: Access to health services for 1 billion people with disabilities*, Missing Billion, July 2019.
[14] *Reimagining health systems*, 2022.

Exhibit 1

People with disabilities experience barriers to healthcare services at every stage of the patient journey.



Source: Céleste Danos et al., *Reimagining health systems that expect, accept and connect 1 billion people with disabilities*, Missing Billion, September 2022

People with disabilities have a right to add years to their lives and life to their years through better health.

As a cohort, people with disabilities are sometimes seen as "less deserving" of care during a crisis. For example, in some US states, ventilator allocation protocols during the pandemic appeared to endorse the removal of these life-saving devices from "people using them for a chronic condition."[15] In the United Kingdom, some COVID-19 patients with learning disabilities (equivalent to intellectual disabilities in other countries) were automatically given "do not resuscitate" notices without consultation or consent.[16]

Finally, disabilities are more prevalent among certain groups that may be marginalized in other ways, further exacerbating barriers to accessing healthcare. The following are some examples:

- Twenty-four percent of people with disabilities live below the national poverty line, compared with 13 percent of those without disabilities.[17] This is a cyclical relationship. For example, McKinsey research shows less than one-fifth of Americans with a disability are employed, compared with nearly two-thirds of those without a disability. And poverty is linked to higher risk of trauma, injury, and disease (Exhibit 2).[18]
- Nineteen percent of women globally have a disability, compared with 12 percent of men.[19]
- Globally, nearly half of people aged 60 or older have a disability.[20]
- Refugees in displacement crises are twice as likely as local populations to have a disability.[21]

About the Missing Billion Initiative and the McKinsey Health Institute

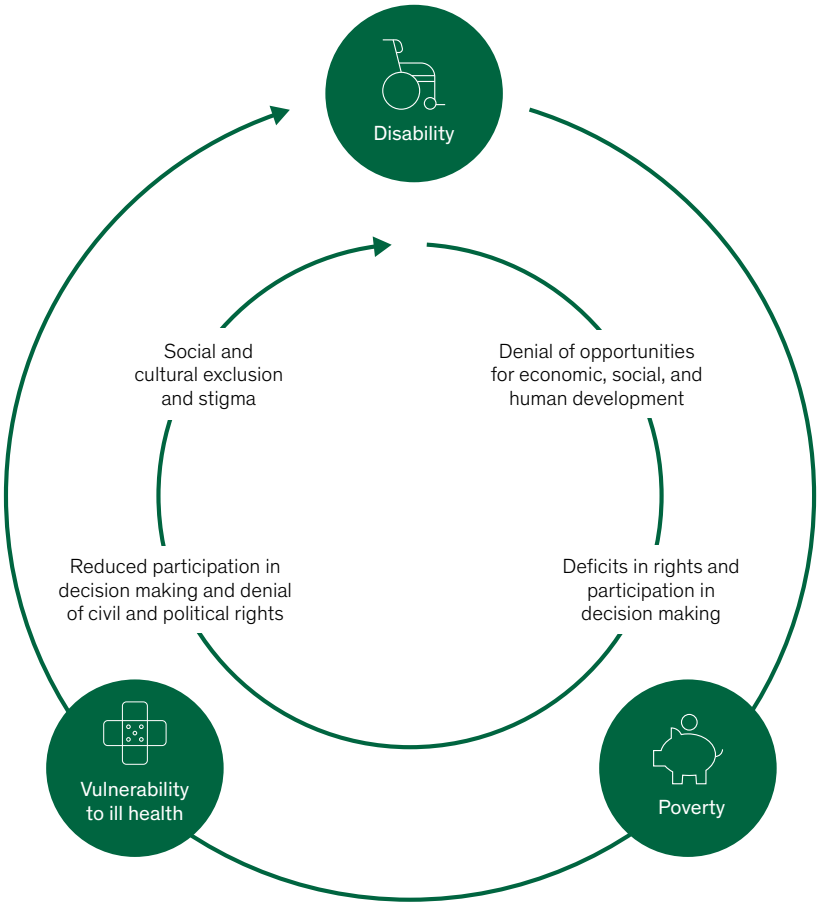
The Missing Billion is a global initiative committed to improving access to health for the 1.3 billion people around the world who have disabilities. The McKinsey Health Institute (MHI) is a non-profit-generating entity of McKinsey and includes health equity as a focus area.

The Missing Billion and MHI are working in partnership to accelerate the movement on inclusive health and develop use cases across countries. A foundational part of this effort is jointly publishing novel insights to demonstrate the health data, access, and outcome gaps for people with disabilities globally.

[15] Bo Chen and Donna Marie McNamara, "Disability discrimination, medical rationing and COVID-19," *Asian Bioethics Review*, December 2020, Volume 12, Number 4.
[16] UK Care Quality Commission, December 2020; reported in Shaun Lintern, "Coronavirus: Unlawful do not resuscitate orders imposed on people with learning disabilities," *Independent*, June 13, 2020.
[17] Poverty data is an average of data from China, Georgia, Indonesia, Korea, Macau, Mongolia, and the United States. National poverty line is the minimum amount of money a person needs to fulfill basic necessities such as shelter and food. For more, see "Realizing the Sustainable Development Goals by, for and with persons with disabilities," 2019.
[18] Lena Morgon Banks and Sarah Polack, *The economic costs of exclusion and gains of inclusion of people with disabilities: Evidence from low and middle income countries*, International Centre for Evidence in Disability and London School of Hygiene & Tropical Medicine, 2014.
[19] Sophie Browne, *Issue brief: Making the SDGs count for women and girls with disabilities*, UN Women, 2017.
[20] Forty-six percent of people over 60. For more, see "Ageing and disability," accessed August 22, 2023.
[21] Refugees: 24.7 percent of Syrian refugees in Sultanbeyli, Türkiye, compared with 12.0 percent of the local population. For more, see Sarah Polack et al., "Disability among Syrian refugees living in Sultanbeyli, Istanbul: Results from a population-based survey," *PLOS One*, 2021, Volume 16, Number 11; Bekir Fatih Meral and H. Rutherford Turnbull, "Comparison of Turkish Disability Policy, the United Nations Convention on the Rights of Persons with Disabilities, and the core concepts of U.S. disability policy," *Alter*, July–September 2016, Volume 10, Number 3.

Exhibit 2

Poverty and disability mutually reinforce each other in a vicious cycle.



Source: Lena Morgon Banks and Sarah Polack, *The economic costs of exclusion and gains of inclusion of people with disabilities: Evidence from low and middle income countries*, CBM, International Centre for Evidence in Disability, and the London School of Hygiene & Tropical Medicine, 2014

Limitations and challenges in disability and health data

Globally, national health systems are awash in data from healthcare clinicians, pharmacies, insurers, national health questionnaires, and more. This data includes personal health data—for example, from claims, registries, electronic health records (EHRs), and testing. It also includes system-level health data (such as prescription volumes and clinical volumes) and population-level statistics (for instance, immunization coverage, mortality, and burden of disease). Much of this data can be disaggregated by age, gender, and ethnicity. This data is important because it provides insights on subsets of the population but it also gives rise to security concerns as data must be prevented from being used for discriminatory purposes.

In addition, our current understanding of the health of people with disabilities is inconsistent and limited by huge gaps in comparison data.[22] Four factors contribute to this health data inequity:

Inconsistent definitions and collection methods
There are many ways to measure disability—including self-reporting, clinical diagnosis,

[22] *Adding years to life*, March 29, 2022.

impairment assessment, and disability registration—but there is no standard, global definition of disability. Moreover, some conditions are difficult to measure objectively and may fluctuate over time. Making meaningful comparisons of disabled populations across countries is difficult because thresholds and criteria vary (see sidebar "Varying determinations of disability"). Increased use of questions from the Washington Group on Disability Statistics to measure disability is addressing this issue,[23] but variations in the application of this tool still lead to problems with comparability.

Data sets built using different data definitions, data formats, collection tools, and administration methods may yield quite different results. For example, the Ugandan Bureau of Statistics administered two surveys to assess the prevalence of people with disabilities—the Uganda Demographic and Health Survey (UDHS) in 2016 and the Functional Disability Survey (FDS) in 2017.[24] Both research groups used the same data collection tool,[25] but the UDHS identified an overall prevalence of disability of 8.4 percent of adults,[26] compared with 16.5 percent in the FDS.[27] This variation in results arose from differences in survey design, interviewer training processes, and targeted respondents (head of household and disabled household member), among other factors.

Lack of consistency in data methods also leads to poor data interoperability, which makes it difficult or impossible to conduct apples-to-apples comparisons across data sets, aggregate data to identify patterns and trends, and otherwise glean meaningful insights (for example, at the local and national levels).

Missing data

Many countries collect no data on disabilities. For example, according to a 2021 report by the Disability Data Initiative, one in four countries included no questions about disabilities in national censuses and household surveys from 2009

[23] The Washington Group on Disability Statistics focuses develops disability measures for use by censuses and surveys. For more, see *Disability Data Collection: A summary review of the use of the Washington Group Questions by development and humanitarian actors*, Leonard Cheshire and Humanity & Inclusion, October 2018.
[24] For more about UDHS, see *Uganda demographic and health survey 2016*, Uganda Bureau of Statistics, January 2018. For more about FDS, see *Uganda functional difficulties survey 2017*, Uganda Bureau of Statistics, July 2018.
[25] Washington Group Short Set Questions with the same threshold. Percentages reflect respondents ages five and up, both sexes, who reported "a lot of difficulty" or "cannot do at all" in at least one domain. For more, see "Washington Group Short Set Questions," Washington Group on Disability Statistics, accessed August 23, 2023.
[26] *Uganda demographic and health survey*, January 2018.
[27] *Uganda functional difficulties survey*, July 2018.

Varying determinations of disability

A look at Vietnam and Germany illustrates the differences in how disability is determined.

Vietnam. Individuals are assessed for disability allowance by a physician based on their ability to perform eight essential activities of daily living. For each activity, they are assigned a score; the sum of those scores equates to their "disability degree," which is used to determine eligibility for benefits.

However, this method has faced criticism for its limitations in identifying individuals with psychosocial and developmental impairments. Additionally, it may underestimate the significant impact of certain conditions, such as deafness, on the ability to complete functional activities.[1]

Germany. Individuals are considered to have a disability if physical, mental, intellectual, or sensory capacities deviate for more than six months from a state that is typical for their age, resulting in prevention from equal participation in society. The degree of disability is determined by a physician on a scale from 20 to 100 in increments of ten. Anyone with a score above 50 is considered severely disabled.[2]

[1] Lena M. Banks et al., *Disability-inclusive social protection in Vietnam: A national overview with a case study from Cam Le district*, International Centre for Evidence in Disability, 2018.
[2] Karsten Ingmar Paul and Alfons Hollederer, "Unemployment and job search behavior among people with disabilities during the first year of the COVID-19 pandemic in Germany," *International Journal of Environmental Research and Public Health*, June 2023, Volume 20, Number 11.

through 2018.[28] And the initiative's 2023 report found that about four in five countries did not include questions about functional difficulty in national censuses and household surveys from 2009 through 2022.[29]

Additionally, most disability data sets are collected on a one-off basis (making it impossible to conduct comparisons over time), do not cover many types of disability (for example, communication impairments), and focus narrowly on disabilities caused by disease. The lack of disability data collected within routine EHRs results in another major missed opportunity to disaggregate these rich data sources by disability.

In the meantime, governments and other stakeholders benefit from nationwide disability data sets, disaggregated by impairment type, that determine healthcare access and needs and inform national healthcare plans. Moreover, healthcare professionals, policy makers, and other stakeholders lack access to large-scale, comprehensive, consistent, disability-specific data sets that could present a fuller picture (across social, economic, public health, clinical, and life-stage lenses) of the lived experiences of those with disabilities.

An additional challenge in collecting and analyzing health data is that data collectors must have core competencies in data privacy and security.[30] A 2019 study found that consumer trust in privacy and data collection was low overall, but consumers expressed the most trust in healthcare and financial services.[31] This likely reflects individuals' high expectations for the privacy of their sensitive healthcare information, especially in communities where disability is stigmatized. It is vital to maintain this trust. Finally, for a population that is so often excluded from data collection, it is crucial to take additional measures to ensure data collection methods are accessible to avoid creating (and drawing conclusions from) biased data sets. Taken together, these factors mean that a focus on solutions cannot be at the expense of privacy or assumed to be without bias.

Data that cannot be disaggregated

Disability health data often does not allow disaggregation by impairment type, despite the fact that people with different impairments may experience different challenges when accessing healthcare. Simply asking, "Do you have a disability (yes or no)?" does not allow disaggregation. Moreover, the data cannot be used in international research because different countries have varying definitions of disability, and stigma may affect the data's reliability.[32]

In addition, impairment-specific studies are not evenly distributed. Systematic reviews of studies have shown that comparatively more data has been collected and analyzed for certain impairment types.[33] For example, 30 percent of studies assessed the relationship between COVID-19 mortality and psychosocial impairments such as depression and anxiety, while just 12 percent examined the relationship between COVID-19 and physical impairments such as loss of a limb and spinal cord injuries. Globally, no publications have examined mortality risk from COVID-19 for people with hearing or vision impairments.[34]

Likewise, a 2021 systematic review of studies comparing the uptake of breast or cervical cancer screenings for people with and without disabilities found that 47 percent of the studies examined psychiatric or mental health impairments, while just 6 percent of studies looked at functional hearing loss.[35]

[28] Sophie Mitra and Jaclyn Yap, *The disability data report 2021*, Disability Data Initiative and Fordham Research Consortium on Disability, 2021.
[29] *The disability data report*, 2023.
[30] Matthias Evers, Lucy Pérez, Lucas Robke, and Katarzyna Smietana, "Better data for better therapies: The case for building health data platforms," McKinsey, April 15, 2022.
[31] Venky Anant, Lisa Donchak, James Kaplan, and Henning Soller, "The consumer-data opportunity and the privacy imperative," McKinsey, April 27, 2020.
[32] *The disability data report*, 2021.
[33] Hannah Kuper and Tracey Smythe, "Are people with disabilities at higher risk of COVID-19-related mortality?: A systematic review and meta-analysis," *Public Health*, September 2023, Volume 222.
[34] Ibid.
[35] Fahrin Ramadan Andiwijaya et al., "Disability and participation in breast and cervical cancer screening: A systematic review and meta-analysis," *International Journal of Environmental Research and Public Health*, August 2022, Volume 19, Number 15.

Insufficient analytics, sharing, and use of data to inform policy actions

Data collectors and other stakeholders frequently don't analyze all the data available with respect to disability, thereby missing opportunities to improve health outcomes for people with disabilities. Furthermore, a lack of global guidelines and best practices on analyzing and sharing disability data leads to substantial variability in approaches and results, in contrast to domains of global health that have embraced platforms that promote data sharing. For example, the Gateway to Global Aging Data provides access to population survey data on aging around the world, and the Dementias Platform UK acts as a comprehensive data repository on individuals with dementia in the United Kingdom.[36]

In addition, the small amount of existing research on the healthcare barriers faced by people with disabilities has not translated to effective policy design and implementation at a global level. Half of EU member states have no legislation requiring reasonable accommodation and prohibiting disability discrimination in healthcare.[37] Country evaluations from the UN Convention on the Rights of Persons with Disabilities (UNCRPD) make it clear that current efforts are inadequate to achieve equity in healthcare access for people with disabilities and that countries have not fulfilled their obligations.[38]

Ultimately, the absence of data to inform policy actions can have serious and sometimes fatal implications. For example, during the COVID-19 pandemic, some countries failed to review evidence linking certain impairments with severe COVID-19 outcomes. As a result, some people at elevated risk were not identified as such (for example, to be prioritized for vaccines), which may have resulted in unnecessary deaths.[39]

Practices to improve data collection and usage

Countries can adopt good practices in data collection and usage to create a more complete picture of the health needs and gaps of people with disabilities and use the data to conduct analysis to inform policy and program decisions.

Good practices in data collection

Several practices have proved to bolster the quality of data collection and usage[40]:

Include a disability marker in EHRs. Ideally, countries would collect disability data from EHRs covering a high percentage of the population and include identifiers of people with disabilities. This would allow policy makers and researchers to compare people with disabilities with the entire population in terms of healthcare needs, access, and outcomes. Among other advantages, analyses could be disaggregated to identify intersectional factors (such as poverty, age, sex, and impairment type) affecting people with disabilities. Although the exact determination of disability varies by country, the ability to compare detailed health information of people with and without various impairments in a given country can unlock rich insights. At present, however, most EHRs do not include a standardized disability marker, and creating one from medical records is challenging because diagnoses are recorded inconsistently and it is difficult to map an impairment (such as visual impairment) to a medical diagnosis (for example, glaucoma). Artificial intelligence could offer a solution to this problem by standardizing the way impairments are tagged and creating cohesive data sets that can be disaggregated by impairment type.

Create disability registries.[41] Registries are voluntary lists of persons with disabilities that can be connected to health data, allowing comparisons

[36] "Gateway to Global Aging Data," National Institute on Aging, accessed August 22, 2023; Sarah Bauermeister et al., "The Dementias Platform UK (DPUK) Data Portal," *European Journal of Epidemiology*, June 2020, Volume 35, Number 6.
[37] Lisa Waddington, "Prohibition of disability discrimination with regard to healthcare in the European Union," European Disability Forum, May 2021.
[38] *The Missing Billion*, July 2019.
[39] Michelle Diament, "CDC adds IDD to list of conditions at increased risk from COVID-19," Disability Scoop, March 3, 2022.
[40] A fourth method, disability-focused research, could fill gaps in disability data and help answer specific questions, but its usefulness can be limited by small sample sizes.
[41] A patient registry is a collection—for one or more purposes—of standardized information about a group of patients who share a condition or experience. See "Defining patient registries and research networks" in Thomas A. Workman, *Engaging Patients in Information Sharing and Data Collection: The Role of Patient-Powered Registries and Research Networks*, Rockville, MD: Agency for Healthcare Research and Quality, 2013.

with the general population. Registries can be difficult to maintain, so they work best for this purpose if a high percentage of people with disabilities are motivated to register (for example, to qualify for benefits), which helps maintain the representativeness of the data set. Unfortunately, registries are often limited in scope and scale. They may not be integrated across all health data, so they may lack details and can become out of date. In addition, they often reflect inconsistent definitions of disabilities across and within countries, and they represent subsets of people with disabilities—for example, those with learning disabilities or receiving employment benefits (see sidebar "The benefits of granular data").

Data collectors and health systems need to recognize and address the risks associated with identifying individuals with disabilities in registries and EHRs—from both a digital identification and a data security perspective.

Conduct surveys. Nationwide censuses and household surveys, which governments often rely on to produce large data sets that inform policy decisions, may include (at most) a subset of questions on disabilities. In many cases, these surveys are not conducted frequently enough to provide timely data, a shortcoming that became apparent during COVID-19 as governments scrambled for data to inform decision making. Surveys also commonly exclude people who are institutionalized or experiencing homelessness (groups in which disability prevalence is likely to be higher). Furthermore, these surveys are often (by design) completed by a single household representative, who may lack understanding of (or fail to acknowledge) the lived experiences of household members with disabilities. Survey methods often exclude people with disabilities (for example, those who have a communication impairment and need an interpreter), and may reflect reporting bias due to the stigma associated with disabilities.

Surveys, including routine demographic surveys, can be a good starting point. They can capture a representative sample of the population and ask detailed questions about the particular and additional barriers facing people with disabilities, which are not revealed elsewhere. However, they

The benefits of granular data

In England, people with learning disabilities experience higher levels of unmet needs and have a shorter average life expectancy—18 years for women and 14 years for men—than the general population.[1] In 2006–07, general practitioners are asked to keep a register of people with learning disabilities.[2]

As of 2021, the voluntary registry included about 250,000 patients who had been identified and diagnosed with learning disabilities by a general practitioner.[3] NHS England calculates disability indicators at the subregional level and includes them in the registry data on key health issues such as screening, recorded disease prevalence, and prescription rates. As a result of the registry, people with learning disabilities may receive wider-ranging health benefits. For example, the registry facilitates the identification of patients who are eligible for an annual learning-disability health check and seasonal flu vaccination. Moreover, analysis of registry data has resulted in changes to the health system, including the launch of STOMP, a project intended to stop the overprescription of psychotropic medicines to people with a learning disability, autism, or both.[4] The registry in England highlights the potential benefits of collecting granular data on various impairment types.

[1] "Health and care of people with learning disabilities: Experimental statistics: 2016 to 2017," NHS Digital, December 12, 2017.
[2] *People with learning disabilities in England 2015: Main report*, Public Health England, November 2016.
[3] Lara Shemtob, Rathy Ramanathan, and Ken Courtenay, "Learning disability registers: Known unknowns and unknown unknowns," *British Journal of General Practice*, April 2021, Volume 71, Number 705.
[4] "STOMP guidance," Coventry and Warwickshire Partnership NHS Trust, accessed August 23, 2023.

require a significant budget, which could be a limiting factor, especially in low-income countries.

Regardless of the data collection method they are using, stakeholders can adopt the following criteria for their data:

— current (less than ten years old)

— nationally representative (not just regional or local)

— inclusive of the full range of impairments

— linked to high-quality health data such as EHRs

— gathered using statistically valid methods:

  - study design and sampling methods that are appropriate to the study question
  - adequate sample sizes and response rates
  - consistently defined and reliable measures of disability and impairment and health outcomes
  - strong analysis, including presentation of confidence intervals

Good practices in data usage

Beyond data collection, stakeholders can also adopt good practices in data usage, including the following:

Analyze existing data sets. Unexamined disability data sets are readily available to researchers. In May 2023, the Global Health Data Exchange (GHDx) identified 2,565 data sets with indicators of health and disability, many of which have yet to be analyzed by governments, nongovernmental organizations, or others to examine the health outcomes of people with disabilities.[42]

More work could also be done to link existing data sets to uncover new insights on the health gap experienced by people with disabilities. For example, the UK Office of National Statistics created the Public Health Data Asset—a data set comprising 2011 census records, death registrations, hospital episode statistics, and primary-care records[43]—that allowed researchers to examine COVID-19-related deaths by hearing and vision impairment status. Finally, national statistics offices could expand efforts to build disability data capabilities with expertise in good practices for analysis.

Publish data. Entities that collect and report on data can prioritize publishing data sets in a timely manner (for example, within three years of collection) to improve the relevance of the analysis.

Use data to direct policies and programs. National health agencies and systems can take a targeted approach to improving health equity for people with disabilities using published data. For example, a review of national strategic plans on HIV revealed that only a few countries acknowledge the need to include disability, and none have included disability comprehensively, despite the fact that HIV prevalence is twice as high for people with disabilities.[44] National disability plans can also be used in tandem with national health plans to coordinate and guide government action, based on evidence from data.

National ministries of health can establish a disability-focused capability—for example, a department or staff member responsible for reviewing disability data and policies. According to a study by WHO, 20 percent of countries in its Western Pacific region had no disability-related capacity within their ministries of health.[45] This capability is key to create a demand for disability health data and advance the agenda of inclusive health based on evidence.

[42] *Reimagining health systems*, 2022; "Dataset records for disability," GHDx, Institute for Health Metrics and Evaluation (IHME), University of Washington, accessed August 23, 2023.
[43] *Reimagining health systems*, 2022; "Coronavirus (COVID-19) related deaths by hearing and vision impairment status, England methodology," Office for National Statistics, November 18, 2022.
[44] Erika Ward, Jill Hanass-Hancock, and Joseph J. Amon, "Left behind: Persons with disabilities in HIV prevalence research and national strategic plans in east and Southern Africa," *Disability and Rehabilitation*, 2022, Volume 44, Number 1.
[45] *Rehabilitation and disability in the Western Pacific*, WHO Regional Office for the Western Pacific, 2017; "STATcompiler," Demographic and Health Surveys (DHS) Program, accessed August 23, 2023; search results for "disability," GHDx, IHME, University of Washington, accessed August 23, 2023.

Over time, stakeholders can also explore opportunities to use artificial intelligence to close the data gap (see sidebar "Exploring how AI can help").

Assessing maturity in data collection and data usage

Countries have made varying degrees of progress in closing the disability data gap. To explore this variability, we developed an approach to assess data collection and data usage maturity based on the strength of the methods commonly adopted.

We analyzed nine countries to assess their maturity against these scales and placed the countries along two axes: data collection and data usage (Exhibit 3) (see sidebar "Research scope and methodology").

Of the nine countries assessed, only Australia and Thailand have high data maturity (an index score of 3) across both axes. Australia has adopted all the criteria for high-quality data collection noted above. This was achieved by including unique identifiers by disability type in nationwide health information records through integration with

Exploring how AI can help

National statistics offices and other researchers have many opportunities to use AI to advance their data collection and analysis efforts while recognizing the risks and limitations of the technology.

Data collection. Unstructured data abounds in healthcare. Researchers could collect this data from a variety of sources and convert it to structured data that could be used as inputs for traditional analysis using natural language processing.[1] Alternatively, generative AI could be used to synthesize large volumes of unstructured data—for example, from clinical notes, medical literature, treatment details, and patient-reported experiences. This type of analysis could be performed on the data directly, where allowed, or on aggregated and anonymized data sets only, which would allow researchers to draw conclusions while protecting individuals' anonymity.

AI has the potential to affect the standardization of impairment tagging in health data sets. Today, health records frequently exhibit inconsistent tags for identical impairments, posing challenges in comprehending health access and outcomes for populations with such impairments. AI can help researchers create extensive and cohesive health data sets, facilitating more-effective analyses.

Another valuable opportunity lies in gathering health data from personal and wearable digital devices such as high-tech watches and rings to create extensive disability and health data sets. To achieve this, individuals with disabilities would voluntarily identify themselves as such on their wearable devices and provide informed consent for their anonymized data to be aggregated. This approach could enable the establishment of meaningful connections between health symptoms and disabilities.

Data analysis and use. Researchers could use machine learning to uncover relationships in large health data sets (for example, between a medical condition and an impairment type). Using AI data-linking techniques, they could integrate disparate data—electronic health records, imaging data, and social determinants of health, for example—to form a comprehensive view of disability and health. They could also continually enhance data quality using algorithms to identify and address errors, inconsistencies, and missing values, leading to cleaner and more-reliable data. Finally, countries could use advanced-analytics AI to assess which national programs and policies for populations with disabilities are most effective at improving health equity.

Risks and limitations. Healthcare leaders must consider not only how to use these techniques but also the risks of doing so. For example, while AI can help reduce bias, it can also embed and scale bias.[2] If an input data set underrepresents an impairment type, the needs of people with this impairment may go undetected because AI accuracy is limited by the quality of the inputs. Finally, healthcare data is particularly sensitive. All countries should create updated legal and regulatory considerations associated with data ethics to ensure that AI-based systems are including informed consent and privacy protection in their use of health data in algorithms.

[1] Shashank Bhasker, Damien Bruce, Jessica Lamb, and George Stein, "Tackling healthcare's biggest burdens with generative AI," McKinsey, July 10, 2023.
[2] James Manyika and Jake Silberg, "Tackling bias in artificial intelligence (and in humans)," McKinsey Global Institute, June 6, 2019.

national insurance data. As a result, the disability data set is automatically and continually updated. Australia also has adopted most of the best practices for high-quality data usage (current policies, transparent and valid analysis, many impairment domains included), although it has yet to fully translate insights into policy or regulatory actions with funding.

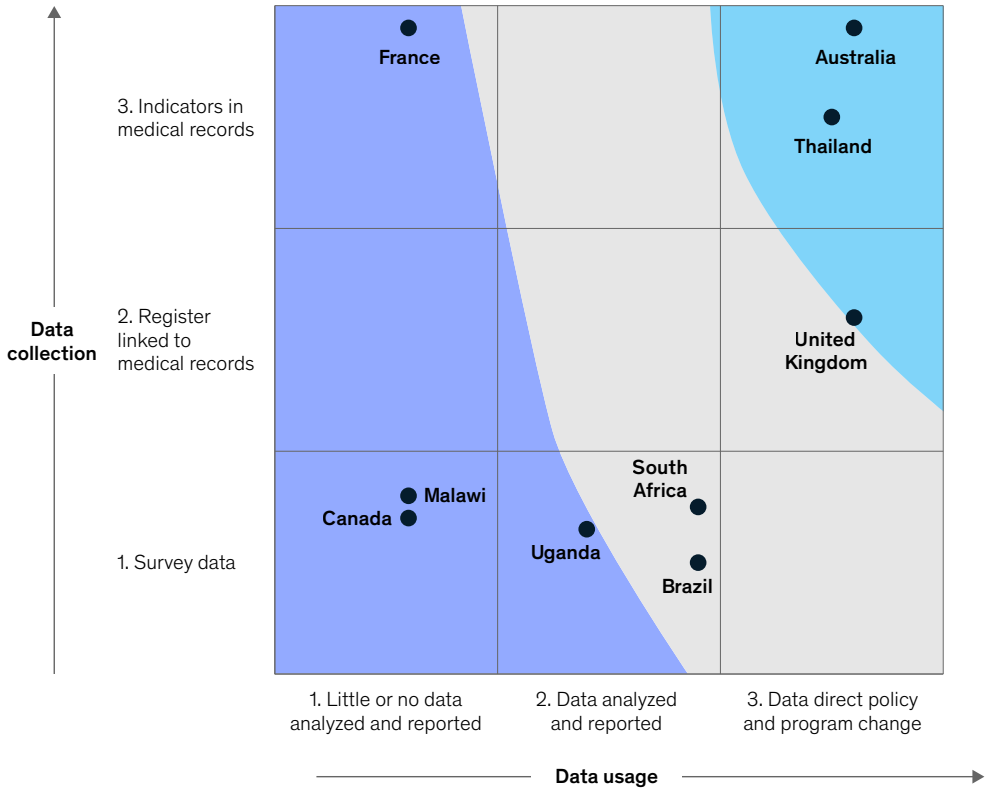
By comparison, health information records in Brazil are neither consistent (some are electronic, while others are still stored on paper) nor aggregated nationally. Brazil conducts a national health survey every five years (most recently in 2019), while best practice is every three years or less. It also uses household sampling as a proxy for national representation. And although it asks 50 questions about functional difficulties and use of assistive devices, its methods are not internationally comparable. Brazil has relatively mature data usage practices but has not consistently translated analyzed and reported data into policy and program changes.

Canada has low maturity because it relies on survey data and has published analysis of disability and health data in only a few provinces. Malawi has low maturity because it relies on survey data alone. Many countries worldwide, regardless of income level, are likely to be in this category.

Exhibit 3

Closing the disability data gap requires improvements in data collection and usage.

Data maturity index assessment, index score of 1 to 3



Source: Missing Billion; McKinsey Health Institute

Research scope and methodology

In May 2023, we conducted a data maturity index assessment of nine countries: Australia, Brazil, Canada, France, Malawi, South Africa, Thailand, Uganda, and the United Kingdom. Research was based on more than 20 publications and websites from national statistics offices, nongovernmental organizations, ministries of health, and academic researchers. The countries were purposely selected to cover six continents, with a range of low- to high-income economies.

The maturity scale was developed based on the strength of the main data collection methods in closing the disability health data gap and how well the data is used (Exhibits 1 and 2). Countries that collect disability surveys were ranked as low maturity, those with disability registries connected to health data are medium maturity, and countries that use electronic health records with a disability tag are high maturity. Where two data collection methods are used, the higher-maturity approach was selected. For data usage, not analyzing the data collected is low maturity, analyzing and sharing data is medium maturity, and using it to inform and change policy is high maturity. Within each maturity level (low, medium, and high) are subcriteria based on data quality (for example, the degree to which the data is nationally representative). The research was assessed by a team of regional McKinsey healthcare experts and academics in each of the nine countries.

Exhibit 1

Countries can strive to attain a high level of quality (checking all five boxes) regardless of the data collection method they are using.

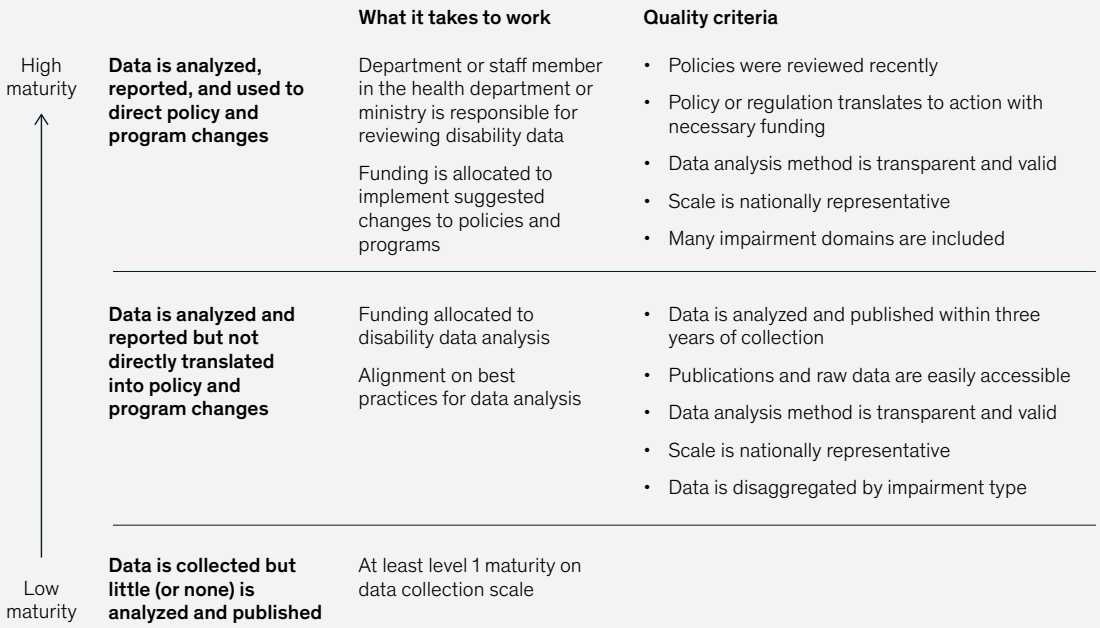
High maturity ↑ Low maturity

	What it takes to work	Quality criteria
Health information records, including disability indicators to allow disaggregation	Health information records (eg, health service or insurance) with a strong architecture that is a computer-based, integrated system that covers a high percentage of the population	• Data collection method is valid • Recency (rolling or ongoing) • Scale is nationally representative • Five or more impairment domains are included[1] • High-quality health data is collected[2]
Disability register linked to health data	High percentage of the population with disabilities are encouraged to register, making the register self-maintaining	• Data collection method is valid • Recency (rolling or ongoing) • Scale is nationally representative • Five or more impairment domains are included[1] • High-quality health data is collected[2]
Survey data, including routine demographic surveys	Routine national data collection that covers a high percentage of the national population Budget dedicated to disability surveys	• Data collection method is valid • Recency (< 10 years old) • Scale is nationally representative • Five or more impairment domains are included[1] • High-quality health data is collected[2]

[1]For example, intellectual, physical, sensory, mental, and social impairments.
[2]High-quality health data is accurate, complete, and relevant data that describes healthcare access and outcomes.
Source: *Disability Data Review: A collection and analysis of disability data from 40 countries*, Leonard Cheshire and UK Aid Direct, July 24, 2018; *Malawi Multiple Indicator Cluster Survey (MICS) 2019-20: Survey findings report*, Malawi National Statistical Office, 2021

Exhibit 2

The most mature countries not only analyze and report data but also use it to inform policy making and program decisions.



Source: *Disability Data Review: A collection and analysis of disability data from 40 countries*, Leonard Cheshire and UK Aid Direct, July 24, 2018

This analysis reveals that data scarcity is not limited to developing economies but is also prevalent in advanced economies. Therefore, the conventional categorization of developing versus developed nations provides only partial assistance in understanding the data landscape.

A call to action

Overcoming the disability health data gap will entail a coordinated and committed effort by relevant stakeholders (Exhibit 4).

The gap in disability data presents a substantial barrier to achieving health equity. Without accurate and comprehensive data, all stakeholders are limited in their ability to address the needs and challenges faced by this large share of the global population. It is crucial for healthcare organizations, governments, donors, implementers, and other stakeholders to prioritize the collection and use of data as a fundamental step toward achieving equitable healthcare for all. By doing so, we can

Exhibit 4

Different stakeholder groups can take specific actions to overcome the gap in disability health data.

Stakeholder	Key action	Maturity level achieved by action
Governments and healthcare organizations, including insurers and private health providers	Insist on inclusion of disability questions on health surveys and censuses, including a funding line and requirement to report against it	Low
	Analyze and publish existing relevant data sets	Low
	Build capabilities in the national statistics office to collect and analyze disability data	Medium
	Link disability registers to health data to allow disaggregation	Medium
	Integrate disability indicators with medical records to allow disaggregation, particularly as health information systems are digitalized over the next 10 years	High
	Establish a disability-related representative in the national health department or ministry who is responsible for ensuring that health-related policy actively targets inclusion of people with disabilities	High
Donors or funders	Fund technical assistance and analytical capacity for national disability and health surveys	Low
	Fund research and advocacy to align on best practices for data collection and analysis, including the criteria for a person to be determined as having a disability	All levels
Implementers, including NGOs[1] and organizations for people with disabilities	Run and analyze disability and health surveys to fill gaps where there is no data	Low
	Advocate with governments on the importance of disability and health data collection and usage	Low

[1]Nongovernmental organizations.
Source: Missing Billion; McKinsey Health Institute

work toward a future in which individuals with disabilities receive the care and support they need, enabling them to lead healthier, more fulfilling lives.

In an upcoming report, we will discuss opportunities for the public and private sectors to play a role in improving healthcare accessibility.

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The authors wish to thank Mona Hammami, Anne-Marie Jennen, Islay Mactaggart, Sara Rotenberg, and Isabel Slattery for their contributions to this report.

Aging with purpose: Why meaningful engagement with society matters

This article is a collaborative effort by Hemant Ahlawat, Anthony Darcovich, Ellen Feehan, Madeline Maud, Neeraja Nagarajan, and Paula Schabel, representing views from the McKinsey Health Institute.

A McKinsey Health Institute analysis shows older adults are happier and healthier when they engage more in society—and helping them do so could benefit the economy.

What is the strongest predictor of health and happiness in old age? A growing body of research suggests the answer is good relationships. These are relationships that impart a sense of purpose and meaningful connection—with each other and with society.

A recent McKinsey Health Institute (MHI) survey of adults aged 55 and older across 21 countries bears out those findings. It found that having purpose in life and meaningful connections with others were among the most important factors bolstering the health of older adults around the world.[1] Respondents frequently cited personal fulfillment and social connection as primary motivators for working or volunteering. What were also deemed important were lifelong learning and participation in community organizations or activities.

These findings all align with the concept of "societal participation," defined by MHI as "consistent involvement in deliberate activities that lead to meaningful engagement with one's society and community." This covers activities that older adults can pursue in their communities such as working, volunteering, pursuing lifelong learning, or participating in community activities.[2] Through these activities, older adults can fulfill many of the factors that influence their health—from finding purpose to connecting with others and staying active.

The topic of societal participation is becoming increasingly relevant at both global and local levels and is frequently discussed as a core component for healthy aging agendas. The UN Decade of Healthy Ageing lists "ability to contribute to society" as one of its five functional ability domains required for healthy aging.[3] Similarly, the National Academy of Medicine's *Global roadmap for healthy longevity* outlines eight long-term goals to aspire toward, four of which relate to enabling societal participation of older adults.[4]

By 2050, the number of people over the age of 65 is expected to grow from 9.4 to 16.5 percent of the world's total population.[5] At the local level, rural-urban divides will increasingly present countries with the challenge of balancing equitable aging experiences.[6] Solving for societal participation in our local cities and communities will be essential for building a future society where healthy aging flourishes—no matter where someone lives.

[1] "Age is just a number: How older adults view healthy aging," McKinsey, May 22, 2023.
[2] There is a distinct difference between "societal" and "social" participation. While we might count hanging out with your friends as "social participation," we wouldn't count it as "societal participation." Equally, incidental encounters such as talking to a grocery cashier would not generally be considered "societal participation" according to our definition.
[3] The WHO defines healthy aging as "the process of developing and maintaining the functional ability that enables well-being in older age." Functional ability comprises five abilities: the abilities to meet basic needs; to learn, grow, and make decisions; to be mobile; to build and maintain relationships; and to contribute to society. For more, see *Decade of healthy ageing: Baseline report*, WHO, 2021.
[4] *Global roadmap for healthy longevity*, National Academy of Medicine, June 2022.
[5] Martin Dewhurst, Katherine Linzer, Madeline Maud, and Christoph Sandler, "Living longer in better health: Six shifts needed for healthy aging," McKinsey, November 11, 2022.
[6] *Achieving equitable healthy aging in low- and middle-income countries: The aging readiness & competitiveness report 4.0*, AARP, February 2023.

Solving for societal participation in our cities and communities will be essential for building a future society where healthy aging flourishes.

Why does societal participation matter?

Societal participation can be good for older-adult health. Among MHI survey respondents, those who participated in societal activities had a 4 to 8 percent uplift in overall perceived health compared with those who didn't participate but wanted to. This finding aligns with existing literature. MHI analyzed more than 70 recent, peer-reviewed academic studies on the societal participation of older adults and found six thematic health benefits: reduced mortality rates; reduced cognitive disability; less functional disability and frailty; decreased loneliness and depression; increased physical activity levels, and enhanced meaning and quality of life.

Some of the strongest evidence to date comes from the decades-long Harvard Study of Adult Development. "The people who were the happiest, who stayed the healthiest as they grew old, and who lived the longest were the people who had the warmest connections with other people," said Robert Waldinger, director of the Harvard study and author of *The Good Life: Lessons from the World's Longest Scientific Study of Happiness* (Simon & Schuster, January 2023) in an interview for McKinsey's *Author Talks* series. "In fact," he said, "good relationships were the strongest predictor of who was going to be happy and healthy as they grew old."

In addition to strong relationships and sense of purpose—priceless commodities in and of themselves—there is an economic benefit to societal participation. MHI estimates an almost US $6.2 trillion[7] annual GDP opportunity across the 21 countries surveyed in our Global Healthy Aging Survey. This equates to an average uplift of approximately 8 percent if we could enable older adults who said they want to work but aren't working to reenter the workforce. For the United States alone, this translates into a US $1.7 trillion opportunity (or 7.2 percent of 2021 GDP).[8] The potential impact on national economies could be substantial (Exhibit 1a and Table 1b).[9] And this is not even taking into account the contributions of older workers today—21 percent of the total workforce in higher-income economies today consist of workers aged 55 and older.[10]

The MHI survey results also estimate that the 55-and-older population contributed almost 73 billion hours of volunteering across the countries

[7] Opportunity size represents the total potential GDP uplift. Several factors may determine how much of this opportunity a country may capture. For example, the degree to which a country pursues and captures the older-adult employment opportunity may be determined by structural characteristics of each country's labor market, including rates of youth unemployment.

[8] This figure reflects 6.5 percent coming from older adults directly reentering the workforce and another 0.7 percent coming from freeing up carers of older adults to return to partial employment.

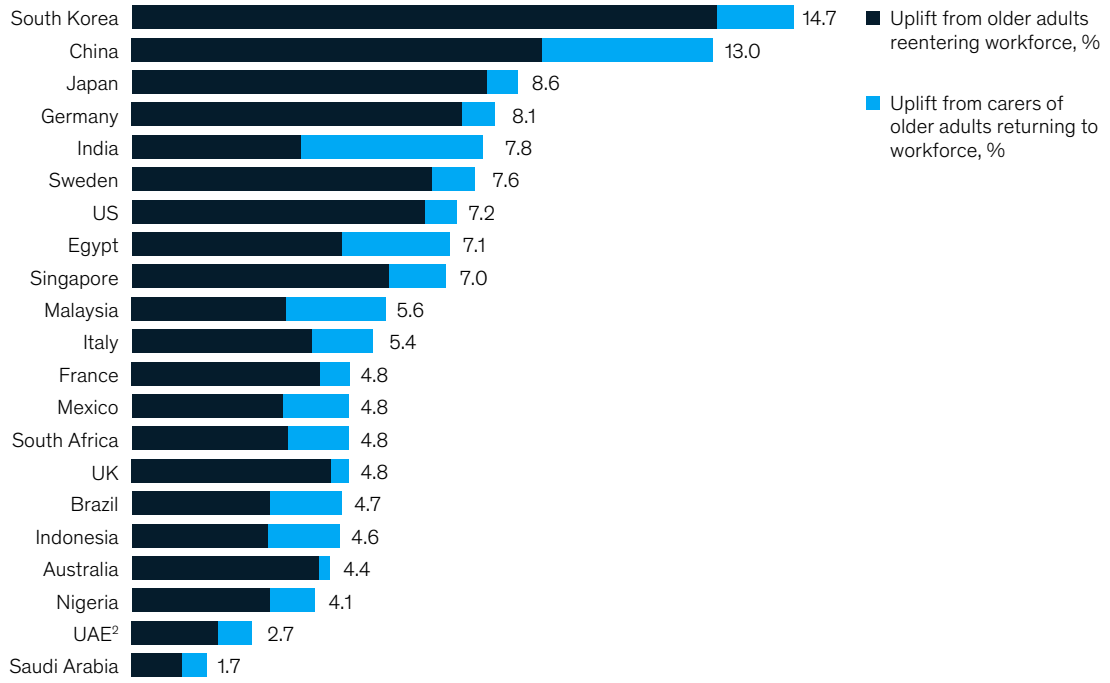
[9] The McKinsey Health Institute's sizing methodology translates unmet employment desires from the Global Healthy Aging Survey into incremental GDP opportunity through added labor income. Calculation of uplift from older adults reentering the workforce is the product of the uplift in total labor force (from getting those older adults who aren't working but want to back into the labor force, assuming a natural rate of unemployment prevents full uptake) and the total annual GDP attributable to labor income, using 2021 GDP data from the World Bank Group, 2021 labor force composition data from the International Labour Organization (ILO), 2018–22 average labor share of GDP data from IHS Markit, and the 2015–19 average natural unemployment rate from Oxford Economics (ILO definition). Calculation of additional employment from under-55 carers is based on primary and part-time carer data from the Global Healthy Aging Survey and the same GDP assumptions as above. While the final figure takes natural unemployment into account, it does not consider other labor market frictions such as what proportion of those respondents wishing to work are employable.

[10] Data from the ILO, UN World Population Prospects, and the World Bank.

Exhibit 1a

Encouraging older adults who want to work but aren't employed to reenter the workforce could add between 2 and 15 percent to annual GDP.

Potential older-adult economic opportunity,[1] % uplift to 2021 GDP



[1]Includes direct uplift from older adult employment and additional employment of under 55 carers who return to the workforce. Calculation of direct uplift is the product of the uplift in total labor force (from including older adults who aren't working but want to back into the labor force, assuming a natural rate of unemployment prevents full uptake) and the total annual GDP attributable to labor income, using 2021 GDP data from the World Bank, 2021 labor force composition data from the International Labour Organization (ILO), 2018–22 average labor share of GDP data from Asian Development Bank, Federal Reserve Bank of St. Louis, S&P Global, and the 2015–19 average natural unemployment rate from ILO. Calculation of additional employment of under 55 carers based on primary and part-time carer data from McKinsey Health Institute (MHI) Global Healthy Aging Survey and same GDP assumptions as per above. Local currency units converted to US dollars using International Monetary Fund's (IMF's) International Financial Statistics average exchange rate (2021). Opportunity size represents the total potential GDP uplift. Several factors may determine how much of this opportunity a country may capture; eg, the degree to which a country pursues and/or captures the older-adult employment opportunity may be determined by structural characteristics of each country's labor market, including rates of youth unemployment.
[2]United Arab Emirates.
Source: Marta Guerriero, *The labor share of income around the world: Evidence from a panel dataset*, Asian Development Bank Institute, working paper number 920, February 2019; S&P Global; ILO Modelled Estimates (ILOEST database), ILO, accessed Apr 2023; International Financial Statistics, IMF; *World Population Prospects 2022*, Population Division, Department of Economic and Social Affairs, United Nations; Share of Labour Compensation in GDP at Current National Prices for China, Indonesia, Mexico, Nigeria, Republic of Korea, Singapore, and United Arab Emirates database, University of Groningen and University of California, Davis, Federal Reserve Bank of St. Louis; World Bank national accounts data; OECD National Accounts data files; MHI Global Healthy Aging Survey, 2023

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sampled. Addressing the unmet demand for volunteering could potentially add more than 103 billion hours per year to this figure. Of that, almost 70 percent of this potential would be from China and India alone (Exhibits 2a and Table 2b).[11]

While the size and distribution of these opportunities vary widely across countries—and our analysis only captures the opportunity from surveyed countries—the economic potential of the societal participation of older adults is

[11] The McKinsey Health Institute's sizing methodology translates unmet volunteering desires from the Global Healthy Aging Survey into aggregate sums of volunteering hours from adults aged over 55 across the 21 countries sampled. MHI determined the proportion of adults aged over 55 who are currently volunteering and the distribution of hours currently volunteered. It was then assumed that those who wanted to volunteer but weren't at present would volunteer at a similar rate as those who currently volunteer. The final figure was adjusted to account for a "natural rate of unemployment" as applied to volunteering.

Table 1b. Key drivers of GDP uplift

Labor share of GDP	• GDP uplift leaders China, Germany, India, Japan, and US have highest labor share of GDP (53%–68%) • Saudi Arabia (13%) and United Arab Emirates (UAE) (28%) have lowest labor share of GDP (economies led by oil and gas, a capital-intensive industry) • India's carer uplift exceeds workforce reentry uplift; India has the highest % of nonprofessional primary carers (62%); China is second highest at (58%)
% of labor force aged 55+	• Leading countries include Germany, Japan, Singapore, South Korea, and US (22%–31%) • Egypt, Malaysia, Saudi Arabia, and UAE have lowest percentage of labor force aged 55+ (5%–10%); Malaysia has among highest percentage of older adults wanting to work who aren't
% of population aged 55+ who want to work and aren't	• Leading countries for desire to work include Malaysia, Saudi Arabia, South Africa, South Korea, and UAE (26%–31%) • South Korea's uplift might largely be explained by a combined high labor share of GDP and a high desire to work

without question. Beyond employment and volunteering, increased societal participation of older adults can also lead to better social harmony through improved intergenerational cohesion and inclusion of the voices of older adults in political discourse.[12]

There is a clear imperative to understand what barriers are inhibiting societal participation (including work), such as whether accessibility is a problem.

Barriers to societal participation

The MHI Global Healthy Aging Survey identified "difficulty landing a job" (49 to 66 percent of respondents) and "lack of attractive opportunities" (39 to 54 percent) as the most commonly cited barriers older adults faced when seeking employment.[13] For those seeking volunteering opportunities, the most commonly cited barriers were "lack of attractive opportunities" (33 to 44 percent of respondents) and "health concerns" (16 to 40 percent). In addition to these findings, MHI's literature review identified several societal barriers and misconceptions impeding progress for older adults seeking opportunities to get involved:

1. Outdated beliefs on age

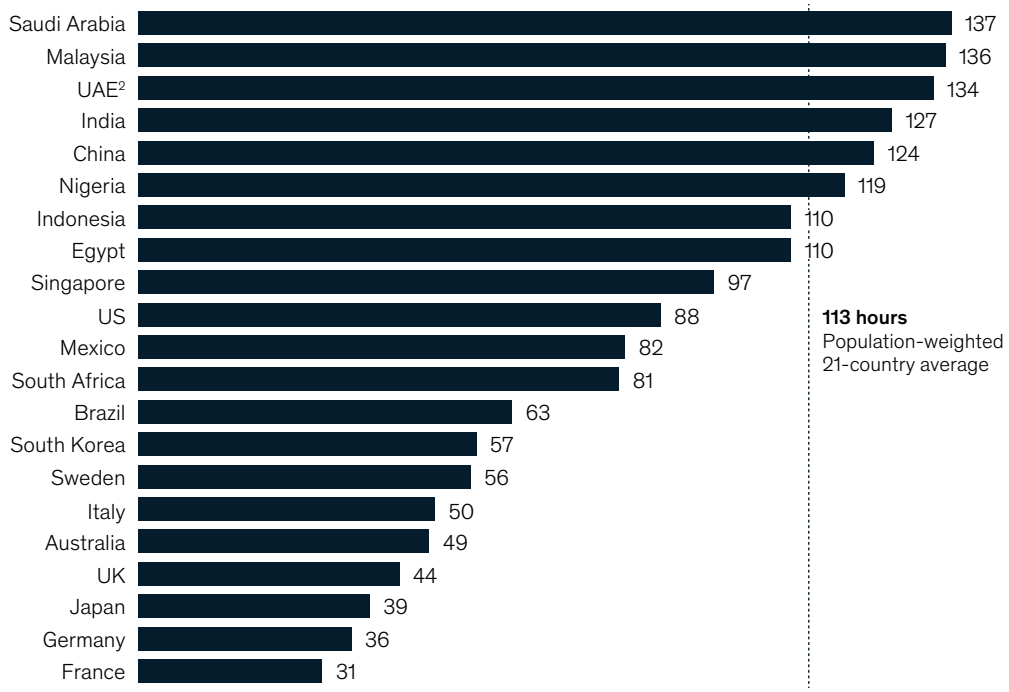
One of the challenges is the ageist attitudes that assume old age is linked to a poorer ability to function effectively.[14] Despite older people being healthier and more educated than ever before, these outdated beliefs can often lead to unfair

[12] *Global roadmap for healthy longevity*, National Academy of Medicine, June 2022.
[13] The data ranges reflect the differences between respondents from high-income-economy countries, upper-middle-income-economy countries, and lower-middle-income-economy countries.
[14] *Global report on ageism*, WHO, March 2021.

Exhibit 2a

More than two hours of volunteering per week are at stake from engaging older adults who want to volunteer but aren't doing so.

Potential older-adult volunteer opportunity,[1] per capita age 55+, hours/year



[1]Includes uplift from older adults who are not currently volunteering who begin to volunteer. Calculation of uplift is the product of uplift in total additional hours volunteered per year (from the entry of older adults who aren't volunteering but want to volunteer) and the population of adults aged 55+, assuming the new volunteers participate in the same distribution of hours per week as current volunteers for 40 weeks per year using volunteering data from the McKinsey Health Institute (MHI) Global Healthy Aging Survey and population data from the World Bank. Calculation of baseline value uses volunteering rates of current older-adult volunteers from MHI Global Healthy Aging Survey and World Bank population data. Total potential additional volunteer hours is divided by total population of adults aged 55+ to produce per capita value. Percentage increase from current to potential volunteering hours/year, per capita age 55+, across countries ranges from 73% to 591%.
[2]United Arab Emirates.
Source: *World Population Prospects 2022*, Population Division, Department of Economic and Social Affairs, United Nations; MHI Global Healthy Aging Survey, 2023

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biases against older adults seeking opportunities to participate.[15] Prepandemic data in the United Kingdom, for example, shows that only 35 percent of workers aged 50 and older made redundant are employed again within three months—the worst percentage of any age group.[16]

2. Isolated efforts across sectors

Stakeholders implementing interventions for the societal participation of older adults often don't consider the needs of other sectors involved. Some governments, for example, subsidize the wages of older workers to incentivize hiring of older job seekers, but one global survey found that wage subsidies were far less attractive to hiring

[15] *Promoting an Age-Inclusive Workforce: Living, Learning, and Earning Longer*, Paris, France: OECD Publishing, 2020.
[16] *A mid-life employment crisis: How COVID-19 will affect the job prospects of older workers*, Centre for Ageing Better, August 2020.

Table 2b. Key drivers of GDP uplift

Current population volunteers aged 55+	• Countries with highest percentage of volunteers aged 55+ are Egypt, Nigeria, Saudi Arabia, and United Arab Emirates (UAE) (42%–46%) • India has a high percentage of volunteers aged 55+ (38%) (volunteerism is a strong tradition in Hindu culture) • High-income countries including France, Germany, Italy, Japan, and South Korea have the lowest percentage of volunteers aged 55+ (~8%–9%)
Volunteer hours/week of age 55+ volunteers	• High-income countries (eg, France, Germany, Italy, Japan) tend to volunteer for fewer hours per week when they volunteer • Countries with relatively high volunteer hours per week (eg, 11–15 hours per week) include China, Malaysia, Saudi Arabia, and UAE
% of those aged 55+ who want to volunteer and aren't	• Leading countries for desire to volunteer include Indonesia, Nigeria, and South Korea (38%–45%) • Countries with relatively low desire to volunteer among those not currently volunteering include Australia, France, Germany, Japan, Sweden, and UK (19%–24%)

managers than other interventions such as well-known industry certifications or attendance at highly reputable employment programs.[17] A lack of coordination across sectors can mean well-intended efforts fall short of expectations.

3. Inequitable access to opportunities

Inequities left unaddressed can compound throughout a person's life, diminishing access to quality societal-participation opportunities at old age. Women, for example, still lag behind men in literacy rates in lower-middle-income economies (54 percent vs 69 percent in lower-income economies and 70 percent vs 83 percent in lower-middle-income economies), which can prevent access to opportunities such as obtaining quality employment.[18] This often means those older adults who could benefit most from high-quality societal-participation opportunities are missing out.

4. Gaps in structural support

While some countries have formal policies that promote the societal participation of older adults (for example, prohibiting use of mandatory retirement among employers), only 63 percent of UN member states have national legislation and enforcement strategies against age-based discrimination.[19] The absence of these government policies and programs may preclude other sectors such as education from implementing their own (for example, providing older adults the opportunity to audit university courses without pursuing a degree).

5. Gaps in data

Three-quarters of the world's countries have limited or no comparable data on healthy aging or on older age groups, according to the WHO.[20] From a societal-participation perspective, this has implications for understating the contributions of

[17] *Meeting the world's midcareer moment*, Generation, July 2021.
[18] *Achieving equitable healthy aging in low- and middle-income countries: The aging readiness & competitiveness report 4.0*, AARP, February 2023.
[19] *UN decade of healthy ageing: Plan of action*, United Nations, April 2020.
[20] Ibid.

older adults (not measuring national volunteering contributions from older people, for example) and unmet demands for participation opportunities (not measuring the percentage of older adults wishing to participate in community activities, for example).

6. An underresearched topic

Many interventions addressing societal participation of older adults are not backed by strong evidence bases. An MHI literature review of 22 commonly recommended age-friendly workforce interventions found that more than three-quarters of the recommendations had insufficient backing evidence.[21] Some interventions had limited evidence of efficacy, while others extrapolated findings from workforce interventions aimed at other diversity and inclusion efforts. A stronger evidence base would enable stakeholders to select or design more effective interventions.

Cities as ideal platforms to address participation barriers

Many of the barriers outlined have their roots in societal attitudes and systemic gaps in understanding. Solving for these barriers will require a fundamental shift in the underlying infrastructure to become supportive and inclusive for people of all ages. To achieve the desired outcomes, this shift will need to extend across all aspects of infrastructure:

- social infrastructure—from fostering community norms where people of all generations work and socialize together to recognizing the important roles that older people play in local communities
- physical infrastructure—from designing the built environment with the mobility needs of all people in mind to improving access via transport systems and proximity of essential facilities
- political infrastructure—from authorizing policies protecting the rights of older people's participation in society to budgeting for programs that create meaningful opportunities for older adults to engage in

Cities and communities serve as the intersection of these infrastructural elements, providing a platform to address older-adult societal participation at a local level. Indeed, the WHO recognizes the connecting role that cities play. In its Age-friendly Cities Framework, the WHO outlines how cities connect various domains of urban life. Of the eight domains listed in the framework, four of them directly relate to enabling societal participation of older adults: community and healthcare, social participation, respect and social inclusion, and civic participation and employment.[22]

The path to meaningful societal participation in cities

The remainder of this article explores what is required at a city level to address the barriers to societal participation of older adults and examples of how select cities have exemplified these approaches to positively benefit their communities.

1. Empower and motivate older adults to live up to their full potential

Empowering older adults to be active and visible in their local communities is a great way to gradually shift ageist beliefs toward a view that is more representative of the local older population. In fact, intergenerational contact strategies are among the most effective interventions for reducing ageism against older people.[23]

City example: Hanoi's community-based organizations run by older people

In Hanoi, Vietnam, 94 intergenerational self-help clubs were established by the nongovernmental organization (NGO) HelpAge International as part of a project to support disadvantaged older people across Vietnam. Local older people could gather and make decisions around how they wanted to

[21] Interventions listed in the literature review included those specific to older workers (for example, midlife career reviews) and those not specific to but often recommended for older workers (for example, flexible working arrangements). The literature review findings were tested with experts and academics in the field of age-inclusive work who were external to McKinsey.
[22] "The WHO age-friendly cities framework," WHO, accessed October 17, 2023.
[23] *Global report on ageism*, WHO, March 2021.

contribute to their local communities. In the three years of the project, club members have collectively raised VND 420 million (approximately $17,600) to maintain their own operations, successfully provided microcredit loans to 390 members for improving income-generating ability, and helped 97 local community members obtain home care services.[24] *Among all these benefits, 99.5 percent of club members reported the unity and solidarity in their communities improved.*[25]

2. Look at programs that provide help to those who need it most

Older adults who may be struggling with financial, health, or housing challenges require dedicated efforts to embrace and engage them in society. This can be achieved through creating programs that specifically target such groups, reserving quotas in programs, and addressing the barriers that prevent the participation of these groups.

City example: Cape Town's peer-to-peer support for older populations

In Cape Town, the peer-to-peer support program AgeWell was piloted as a low-cost means of supporting the needs of an expanding older-adult population. A nonrandom sample of 212 people aged 60 and older were selected from the township of Khayelitsha, where the local population was predominantly composed of disadvantaged, Black, and isiXhosa-speaking South Africans with limited resources and limited access to formal healthcare services. AgeWell clients were regularly visited by recruited volunteers (aged 60 and over themselves), who would befriend the clients and help refer them to relevant medical professionals and social service providers. AgeWell clients showed improvements in mental well-being scores throughout the program with a baseline average of 50 percent rising to 79 percent—an overall improvement of 58 percent.[26]

3. Encourage cross-sector collaborations wherever possible

Cross-sector collaborations can ensure the right expertise and resources are properly used in the effort to encourage the societal participation of older adults. Businesses can work with aging-related NGOs to incorporate age-friendly workplace practices. Governments can work with universities and community groups to amplify existing, lifelong learning opportunities.

City example: Santiago's all-of-society solution for improving city accessibility

In the Chilean capital, Santiago, thousands of older adults wear RedActiva bands—red silicone bracelets that help them navigate the city. Wearers can use the band to request an extension of pedestrian crossing times at a traffic light, access free restroom facilities at participating businesses, and signal preferential stops for public transport. The RedActiva band was developed through a successful public–private partnership between the Universidad Católica de Chile,[27] *the Asociación de AFP de Chile, traffic authorities, and older citizens themselves. At approximately US $2 per unit, the RedActiva band is an example of innovative user-centric design and cross-sector collaboration.*[28]

4. Invest in support structures for societal participation of older adults

Governments can lead by example when promoting societal participation of older adults. This could come in the form of creating programs in collaboration with other sectors, such as a local department of aging working with a chamber of commerce to explore volunteering opportunities for older adults, or putting in anti-age-discrimination protections.

[24] "Hanoi, Vietnam: Hanoi's Intergenerational Self-Help Clubs," United Nations Human Settlements Programme, accessed October 9, 2023.
[25] "Supporting disadvantaged older people by replicating intergenerational self-help club model in Vietnam," HelpAge Vietnam, December 2020.
[26] Leon Geffen et al., "Peer-to-peer support model to improve quality of life among highly vulnerable, low-income older adults in Cape Town, South Africa," *BMC Geriatrics*, October 2019, Volume 19.
[27] Laboratorio de Innovación Pública is the specific group within the university responsible for RedActiva.
[28] Sebastián Negrete et al., "Service design and the co-production of public policies: The case of RedActiva," Linköping University Electronic Press, June 18, 2018.

City example: Singapore's investment in its older workforce

The Singapore government has been investing in its older workforce across all steps of the employment journey. Older workers participating in reskilling programs can have up to 90 percent of course fees subsidized, employers are supported with funding and knowledge to redesign jobs for older workers and create age-friendly workplaces, and the government has specified a reemployment age to legally protect the rights of workers wishing to continue working at old age.[29] *Over 24,000 workers aged 50 and over have benefited from job design grants given out to over 2,500 companies while over 99,000 seniors have learned new skills from more than 1,000 courses offered through Singapore's National Silver Academy. Employment rates of adults aged 65 and older grew from 17.1 percent in 2010 to 31 percent in 2022.*

5. Improve measurements of societal participation

Availability of data on city-level participation, needs, and preferences of older citizens is the foundation for designing tailored interventions and tracking success. In line with local data policies, there are various means by which data can be collected: surveys, longitudinal studies, geocoded maps, wearable sensor technologies, and others.

City example: Barcelona's data-driven approach to the societal participation of older adults

The Barcelona City Council approved its Strategy for demographic change and ageing *in 2018 following an in-depth diagnosis of its local city population. Through this analysis, the local government identified several themes relating to societal participation of older Barcelona citizens: 65 percent of this group never attended any group activities, participation rates varied greatly between districts, and preference for attending community activities in local neighborhoods was disproportionately high among those aged 65 and over.*[30] *Equipped with those data points, the Barcelona City Council designed an aging strategy to promote societal participation in line with local population preferences. Highlights include programming a wide breadth of activities, broadening senior access to local facilities such as music schools and museums, and involving older citizens in shaping the city's public transit policies.*

6. Generate evidence for promising societal-participation approaches

Formal assessments of existing interventions to improve societal participation of older adults can be a useful tool to help identify truly effective solutions. On the other side of the equation, implementing agencies can harness a strong, evidence-based approach to instill confidence among potential investors and sponsors.

City example: Philadelphia; South Bronx, New York; Minneapolis; Portland; and Port Arthur, Texas, and the origins of scaling evidence-based volunteering

A pilot program called Experience Corps was trialed in five US cities in 1996 to use older volunteers to help disadvantaged school children. The program was evaluated by researchers from Johns Hopkins University, who found demonstrable improvements in child literacy and teacher retention, as well as health benefits for the older volunteers (weight loss, blood pressure reductions, and improved cholesterol levels).[31] *Today, Experience Corps (now known as AARP Foundation Experience Corps) has expanded to encompass more than 2,000 volunteers serving more than 30,000 students across 21 cities.*[32]

Creating opportunities to benefit all

Phrases such as "silver tsunami" often imply that older adults will be a drain on resources. They fail to

[29] *Living life to the fullest: 2023 action plan for successful ageing*, Singapore Ministry of Health, January 2023.
[30] "Strategy for demographic change and ageing: A city for all times of life (2018-2030)," Barcelona City Council, July 2018.
[31] *The new map of life*, Stanford Center on Longevity, April 2022.
[32] "Legacy Programs," CoGenerate, accessed October 9, 2023.

recognize the value and potential of older adults in society. MHI believes greater societal participation of older adults benefits everyone: it can improve the social and mental health of older adults,[33] boost GDP, and offer intergenerational connections for younger members of society.

Our research indicates that while there is universal unmet demand for older adults to be more actively engaged in their societies, there are also promising ways forward. As we have highlighted, encouraging societal participation of older adults requires an all-of-society approach: from governments investing in creating opportunities to employers shaping age-inclusive workplaces and older adults themselves propelling the changes they wish to see. Finding mediums that naturally convene stakeholders to work together—such as the cities we live in together—is imperative to creating a more vibrant, healthy society. More importantly, we must recognize that every member of society has a role to play in moving toward a more inclusive, more engaged future, regardless of age.

[33] Lanshuang Chen, Yifei Ding, and Zhen Zhang, "The relationship between social participation and depressive symptoms among Chinese middle-aged and older adults: A cross-lagged panel analysis," *Frontiers in Public Health*, 2022, Volume 10.

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The authors wish to thank Alexandru Degeratu, Viktor Hediger, Pooja Kumar, Eric Liu, and Malik Martin for their contributions to this article.

Reframing employee health: Moving beyond burnout to holistic health

by Jacqueline Brassey, Brad Herbig, Barbara Jeffery, and Drew Ungerman

A new McKinsey Health Institute survey across 30 countries offers insights into how organizations can help create a workplace that prioritizes physical, mental, social, and spiritual health.

For most adults, the majority of waking daily life is spent at work. That offers employers an opportunity to influence their employees' physical, mental, social, and spiritual health.

To support the move to better health, the McKinsey Health Institute (MHI), along with other organizations such as the World Health Organization (WHO), are highlighting a more modern way to view health beyond illness and its absence.[1] Embracing the concept of holistic health—an integrated view of an individual's mental, physical, spiritual, and social functioning[2]—is a vital step toward "adding years to life and life to years" across continents, sectors, and communities.

Previous research from MHI has focused on how modifiable drivers of health can lead to healthier, longer lives. The majority of these—ranging from quality of sleep to time spent in nature—sit outside of the traditional healthcare system, and many of these drivers could benefit from employer support. MHI's new survey of 30,000 employees across 30 countries explores how employees perceive their health and how workplace factors may act as demands upon or enablers to mental, physical, spiritual, and social health.

At a glance

- *Holistic health encompasses physical, mental, social, and spiritual health.* The McKinsey Health Institute's 2023 survey of more than 30,000 employees across 30 countries found that employees who had positive work experiences reported better holistic health, are more innovative at work, and have improved job performance.
- *For employees, good holistic health is most strongly predicted by workplace enablers, while burnout is strongly predicted by workplace demands.* Providing enablers alone will not mitigate burnout, and addressing demands alone will not improve holistic health. A complementary approach is needed.
- *Organizational, team, job, and individual interventions that address demands and enablers can boost employee holistic health.* These may include flexible working policies, leadership trainings, job crafting and redesign, and digital programs on workplace health.

[1] *Adding years to life and life to years*, McKinsey, March 29, 2022; A 2022 MHI survey on global health perspectives found that more than 40 percent of respondents who reported having a disease still perceived their health as good or very good, while more than 20 percent of those who reported no disease said they were in fair, poor, or very poor health.

[2] Previous work from MHI has defined each dimension of health in detail. For more details, see *Adding years to life*, March 29, 2022. Using this definition means that we emphasize "functioning." For example: well-functioning from a mental health perspective means that respondents agree or fully agree with the statement, "I feel in a positive cognitive, behavioral, and emotional state of being" or for spiritual health, "I feel a connection to something larger than myself (for example a community, a calling, or a faith/God").

Providing enablers alone will not mitigate burnout, and addressing demands alone will not improve holistic health. A complementary approach is needed.

The reasons to act go beyond improving health. Recent McKinsey research finds that employee disengagement and attrition—more common among workers with lower well-being—could cost a median-size S&P company between $228 million and $355 million a year in lost productivity.[3] Research by MHI and Business in the Community showed that the UK economic value of improved employee well-being could be between £130 billion to £370 billion per year or from 6 to 17 percent of the United Kingdom's GDP. That's the equivalent of £4,000 to £12,000 per UK employee.[4]

In the MHI Holistic Health framework and research model,[5] we demonstrate the additional value of measuring holistic health over and above other popular health-related outcomes such as burnout or other well-being-related outcomes such as engagement or happiness. The insights presented in this article are vital for organizations determining where to start when aiming to improve employee health and how to enable them to start considering, measuring, and improving holistic health.

The majority of employees report positive overall holistic health

We found that more than half of employees across 30 countries reported positive overall holistic health[6]—but there are substantial variations between countries, with the lowest overall percentage of positive scores in Japan (25 percent)[7] and the highest percentage of positive scores in Türkiye (78 percent). Among respondents, the largest proportion of positive scores was for physical health at 70 percent, and approximately two-thirds of global employees reported positive scores on mental and social health. The lowest proportion of positive scores were on spiritual health, at 58 percent.

When looking at demographic differences and nuances, those aged 18 to 24 had the lowest holistic-health scores. This complements previous MHI work on the challenges facing Gen Z. For companies, size matters: respondents in larger companies (more than 250 employees) had higher holistic-health scores than those in smaller companies. Within role, managers had the highest holistic-health scores, while all other workers reported lower holistic health. Further, there are similar levels of good holistic health across the industries surveyed (Exhibit 1).

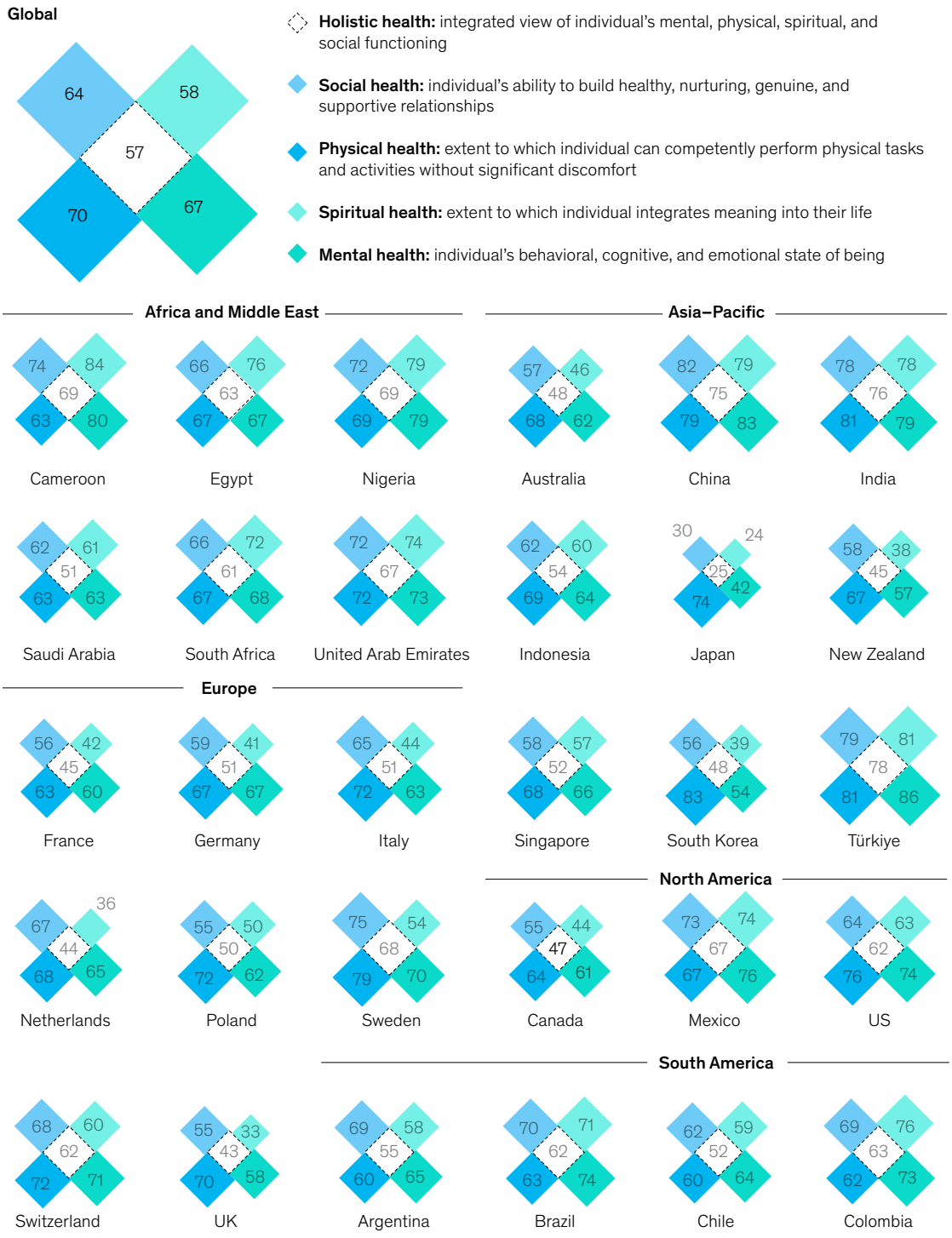
At a country-specific level, factors such as burnout symptoms, emotional impairment, or cognitive impairment vary. However, one common finding is a lack of energy: more than a third of respondents in 29 of the surveyed countries reported exhaustion. Comparatively, only three countries had a third or more respondents reporting mental distance or reluctance to work (Exhibit 2).

[3] Aaron De Smet, Marino Mugayar-Baldocchi, Angelika Reich, and Bill Schaninger, "Some employees are destroying value. Others are building it. Do you know the difference?," *McKinsey Quarterly*, September 11, 2023.
[4] "Prioritise people: Unlock the value of a thriving workforce," Business in the Community, April 24, 2023.
[5] Grounded in contemporary academic research, expanded with new concepts and psychometrically validated.
[6] With positive holistic health we report the percentage of respondents that rated a 4 or higher, on average, for each subdimension (mental, physical, social, and spiritual health) and for the overall holistic health percentage, this average of 4 or higher was consistent across all subdimensions for the respondents reported. Hence the overall number can be lower than the averages of all other dimensions separately. We used a 5-point Likert scale, where 1 = fully disagree, 3 = neither disagree nor agree, and 5 = fully agree.
[7] As with all cross-cultural research, differences in scores across countries can be driven by: 1) true differences between countries on variables of interest along with 2) differences between countries due to artifacts such as within-country response styles or context-driven stigma. As an example, in our current survey, we observed lower scores across *many* variables of interest in Japan compared with other countries. When reviewing cross-cultural findings, we recommend the reader considers the cultural context of the country and region.

Exhibit 1

Although the global level of good holistic health is around 60 percent, levels of good mental, physical, social, and spiritual health vary by country.

Reported good health, by health dimension,[1] % of respondents



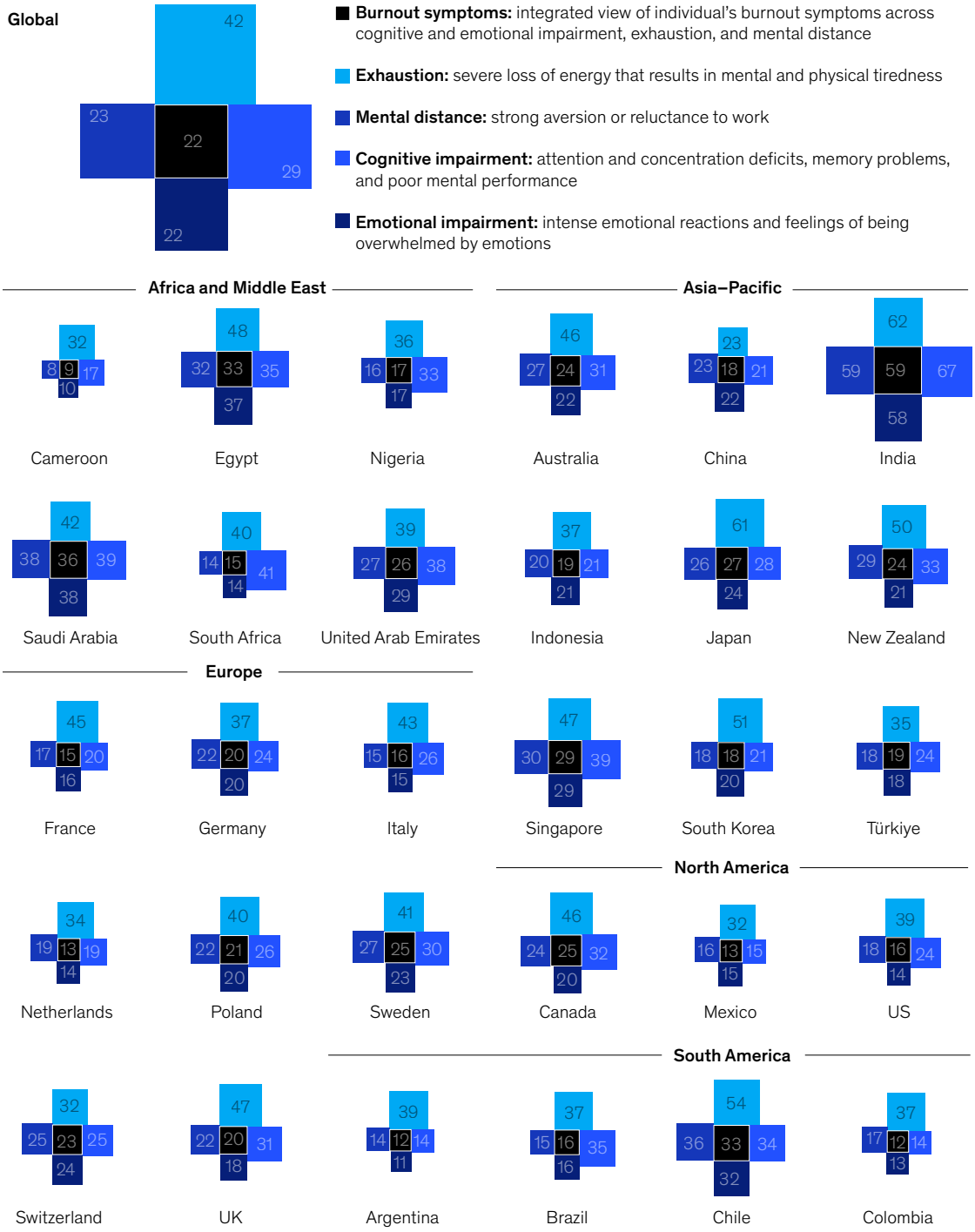
[1]Data on mental, physical, social, and spiritual health represent percentage of respondents scoring average of ≥4 (scale of 1–5) on items for each dimension. Data on holistic health represent percentage of respondents scoring average of ≥4 across all 4 dimensions.
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

McKinsey & Company

Exhibit 2

Although the global level of burnout is around 20 percent, cognitive and emotional impairment, exhaustion, and mental distance vary by country.

Reported experience of burnout symptoms, by symptom dimension,[1] % of respondents



[1]Data on cognitive impairment, emotional impairment, exhaustion, and mental distance represent percentage of respondents scoring average of ≥3 (scale of 1–5) on items for each dimension. Data on burnout symptoms represent percentage of respondents scoring average of ≥3 across all 4 dimensions.
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

McKinsey & Company

What we measured

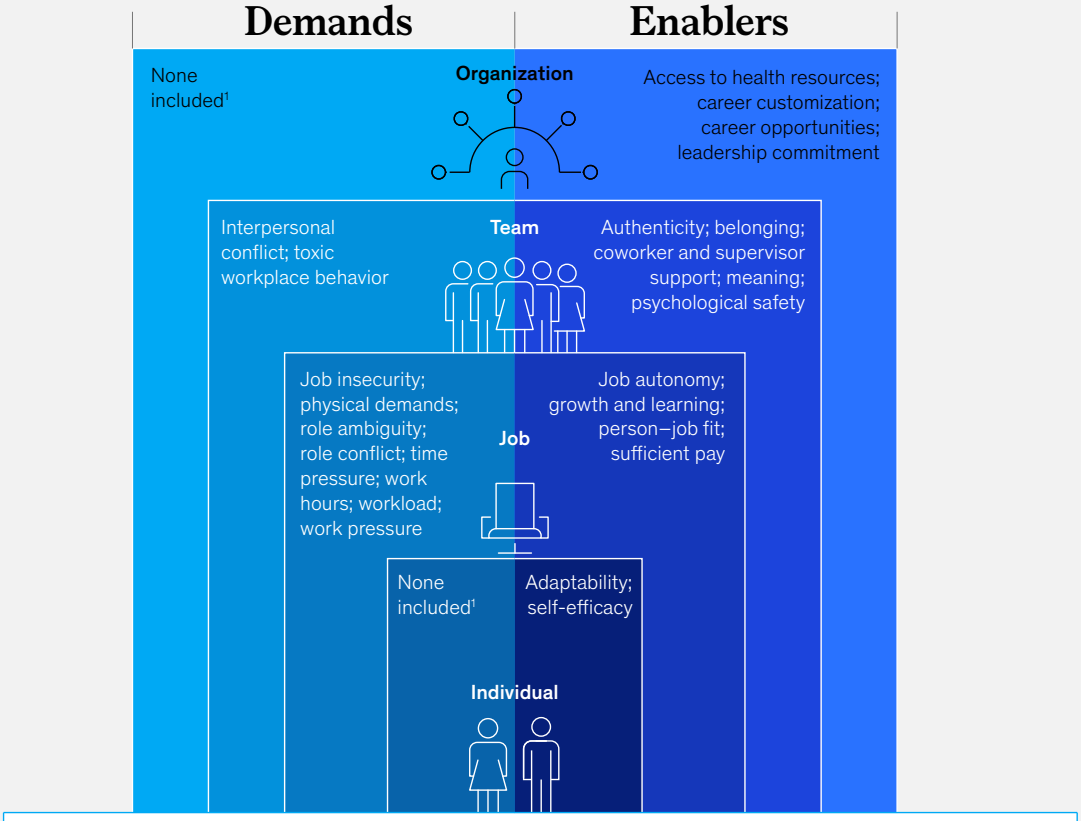
From April to June 2023, the McKinsey Health Institute conducted a global survey of more than 30,000 employees in 30 countries (Argentina, Australia, Brazil, Cameroon, Canada, Chile, China, Colombia, Egypt, France, Germany, India, Indonesia, Italy, Japan, Mexico, Netherlands, New Zealand, Nigeria, Poland, Saudi Arabia, Singapore, South Africa, South Korea, Sweden, Switzerland, Türkiye, United Arab Emirates, United Kingdom, and United States). The dimensions assessed in our survey included toxic workplace behavior, interpersonal conflict, workload, work hours, time pressure, work pressure, physical demands, role conflict, role ambiguity, job insecurity, access to health resources, leadership commitment, career opportunities, career customization, psychological safety, supervisor support, coworker support, authenticity, belonging, meaning, job autonomy, remuneration, person–job fit, learning, and growth. Individual self-efficacy and adaptability were also assessed (exhibit).

The role of these dimensions were tested to determine whether they were associated with several health-related outcomes (holistic health, burnout symptoms, depression symptoms, distress symptoms, anxiety symptoms, sleep hours, sleep satisfaction, happiness at work, loneliness at work, financial instability) and several work-related outcomes (work engagement, organizational advocacy, job satisfaction, work–life balance, intent to leave, absenteeism health, absenteeism caregiving, task performance, presenteeism, and innovative work behaviors).

Exhibit

Workplace factors can affect health- and work-related outcomes.

What we measured



[1]While demands at this level can be measured, McKinsey Health Institute research model prioritized what employers have the most ability to change.
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

McKinsey & Company

Understanding demands and enablers for employees

In this survey, MHI explored a wide set of *demands*, which are workplace factors that require sustained cognitive, physical and/or emotional effort, and *enablers*, which can offset job demands.[8] Demands can be thought of as challenges in the workplace, and enablers help to effectively offset challenges, allowing employees to move forward and experience positive growth and development.

Our research model explores how these demands and enablers influence several work-related and health-related outcomes (see sidebar "What we measured"). Building on previous research, we now consider a vital new aspect: the relationship between demands, enablers, and an employee's holistic health.

The MHI model predicted a large proportion of the variance in holistic health, at 49 percent, well exceeding traditional research models' predictions regarding variance in outcomes.[9] The higher the explained variance, the better positioned the model is to be able to reliably predict differences between employees' outcomes. Interestingly, we find that as scores on one subdimension of health increase, scores on *all* subdimensions of health rise.

Enablers—aspects of work that provide positive energy such as meaningful work and psychological safety—explain the most variance in holistic health. Those who find meaning in their work and feel they can raise new ideas or objections with their coworkers are more likely to feel they are in better health across all four dimensions (Exhibit 3).

Holistic health also offers insight into workforce performance. For example, employees with good holistic health are more likely to indicate that they are innovative at work, have better work performance, and experience better work–life balance.

When examining burnout symptoms, demands—such as toxic workplace behavior, role ambiguity, or role conflict—are seven times more predictive than enablers are.

Team-, job-, and individual-level drivers affect holistic health (Exhibit 4). This means that workers who have confidence in their ability to do good work, are adaptable during changing working conditions, and feel as though they belong to a community at work have improved holistic health.

Team- and job-level drivers affect burnout symptoms. This means that workers who are excluded, bullied, or receive demeaning remarks from colleagues or who are unclear on what is expected of them at work have higher burnout symptoms.

The relationship between holistic health and outcomes

Holistic health uniquely contributes to the prediction of several work-related outcomes, over and above related concepts such as burnout symptoms, engagement, and happiness at work. This highlights that the underlying components of health, while correlated with other workplace measures, are not equivalent to engagement or happiness at work.[10]

Holistic health is a strong measure of how an employee can sustain growth over time, which

[8] Arnold B. Bakker, Evangelia Demerouti, and Ana Sanz-Vergel, "Job demands–resources theory: Ten years later," *Annual Review of Organizational Psychology & Organizational Behavior*, February 2023, Volume 10, Issue 1; In this article, we are building on the job demands–resources theory, but we have used more reader-friendly terms that better resonate with the audience. Where we describe "demands" we are referring to the term "demands," and for "enablers" we refer to "resources" as used in academic literature.

[9] Peterson K. Ozili, "The acceptable R-square in empirical modelling for social science research," *Social Research Methodology and Publishing Results*, January 2023. We are aware, however, that common method variance (using the same survey instrument to measure drivers and predictors) inflates results as well. Our research clarifies associations and correlations but does not confirm causality.

[10] This was also confirmed in our psychometrical tests, factor analysis, and model confirmation. For completeness' sake: Pearson's correlation between holistic health and employee engagement in our study was 0.46, and with happiness at work it was 0.50. In our predictive models with work-related outcomes such as innovative behavior and work–life balance, we found that holistic health predicted unique variance over and above employee engagement and happiness.

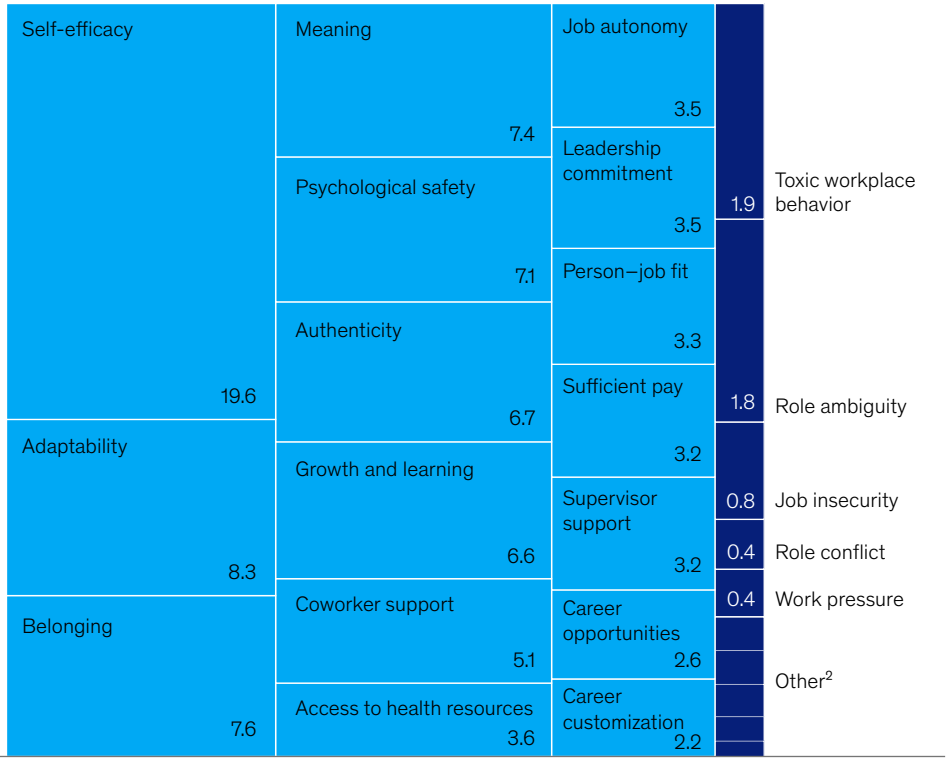
Exhibit 3

Holistic health

In a model of holistic health, enablers are 14 times more predictive than demands are.

Enabler 93.5 Demand 6.5

Enablers and demands predicting holistic health,[1] % share

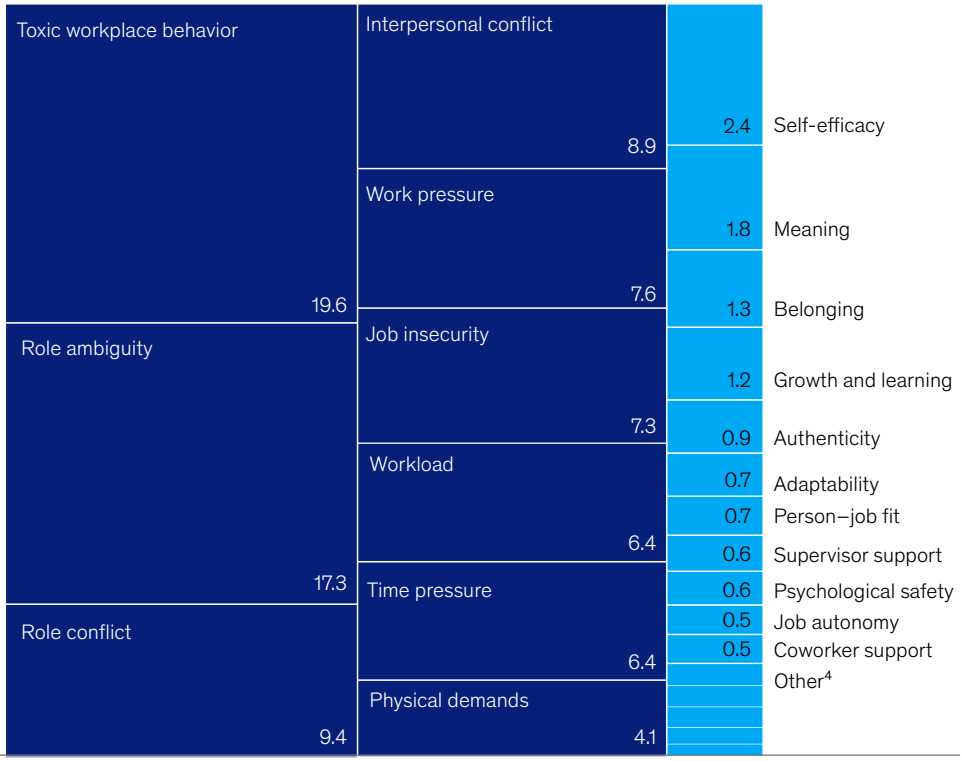


Burnout symptoms

In a model of burnout symptoms, demands are seven times more predictive than enablers are.

Enabler 13.0 Demand 87.0

Demands and enablers predicting burnout symptoms,[3] % share



Note: Shares based on McKinsey Health Institute research model. Figures may not sum to listed totals, because of rounding.
[1]Explained variance in holistic health is 49%.
[2]Interpersonal conflict (0.3%), physical demands (0.3%), time pressure (0.3%), workload (0.2%), and work hours (0.1%).
[3]Explained variance in burnout symptoms is 69%. Work hours are not a significant demand (0.2%).
[4]Access to health resources (0.4%), career opportunities (0.4%), leadership commitment (0.4%), sufficient pay (0.3%), and career customization (0.2%).
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

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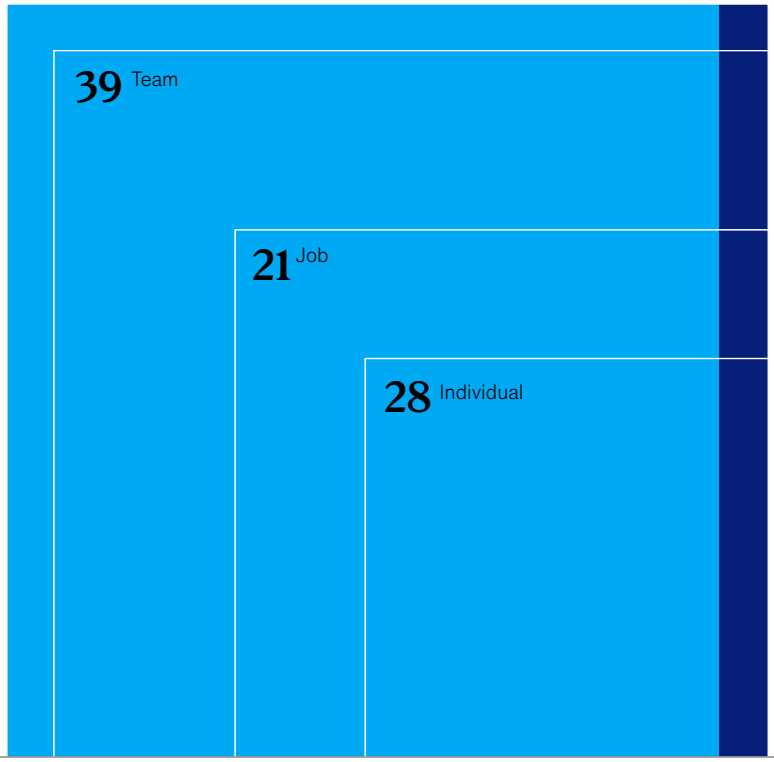
Exhibit 4

Holistic health

Holistic health is mostly driven by individual, job, and team enablers.

Enabler Demand

Enablers and demands of holistic health,[1] by level, % share

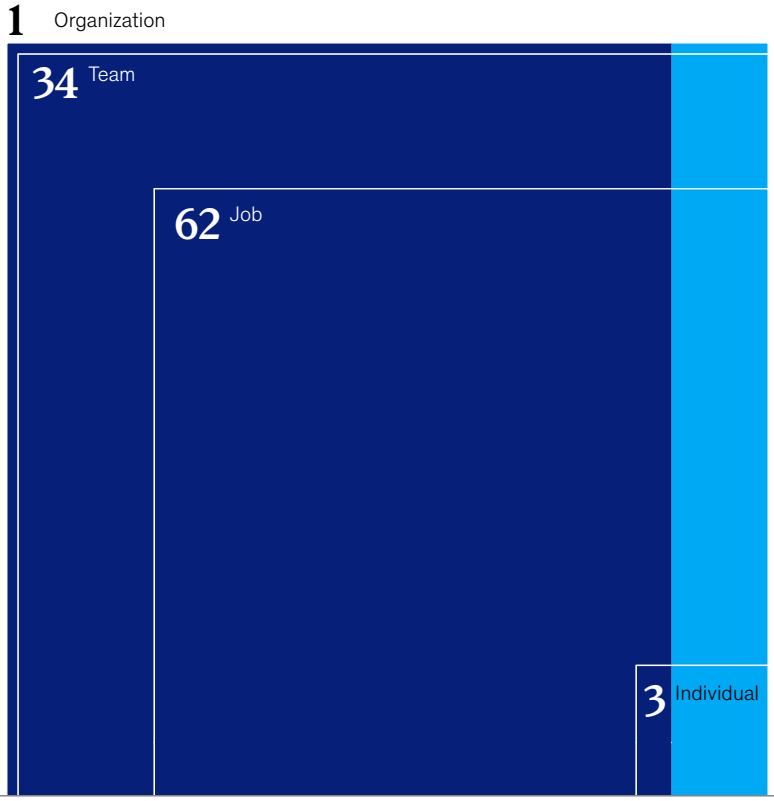


Burnout symptoms

Burnout symptoms are driven almost entirely by team and job demands.

Enabler Demand

Demands and enablers of burnout symptoms,[2] by level, % share



Note: Shares based on McKinsey Health Institute research model.
[1]Explained variance in holistic health is 49%.
[2]Explained variance in burnout symptoms is 69%.
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

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contributes to positive workplace performance. Having employees with strong holistic health has implications beyond short-term business performance. Community engagement beyond work is one example: when employees are suffering from poor holistic health, they are likely unable to help their communities. Relatedly, they may create a strain on health services through delaying care. This also could have implications for the role employers play in their communities—and for cities that are trying to foster good physical health and grow societal participation and purpose-driven initiatives among residents. Furthermore, employees who have strong holistic health may want to—and are better able to—work longer, which will be important for how employers approach an aging workforce.

How burnout symptoms factor into health

Consistent with our previous research on burnout, we found that 22 percent[11] of employees are experiencing burnout symptoms at work across the 30 countries included in our study, although there are substantial variances between countries. Cameroon respondents reported the lowest rates of burnout symptoms (9 percent), and India respondents reported the highest rates of burnout symptoms (59 percent).[12] When exploring demographic differences on burnout, we find younger workers aged 18 to 24, employees from smaller companies, and all workers who are nonmanagers report higher burnout symptoms.

Our survey findings underscore a critical pattern: demands—aspects of work that require energy such as dealing with toxic behaviors or role ambiguity—explain the most variance in burnout symptoms.[13] But burnout is only the starting point: employers have a critical role to play in addressing a range of negative (mental) health outcomes at work beyond burnout.

It's time to reframe how we think about employee health. Employers need to support the health of *all* employees—supporting those in ill health, taking preventative measures to avoid negative health outcomes, and actively building a work environment where more employees have positive holistic health.

Improving holistic health and burnout together

MHI explored how workers across our global sample were faring on both holistic health and burnout symptoms in the 30 countries we surveyed (Exhibit 5). The presence of positive holistic health doesn't mean absence of burnout symptoms. They are negatively correlated but aren't two opposite sides of the same spectrum. Burnout and holistic health can coexist.[14]

At the global level, we found approximately half of employees (49 percent) are "faring well"—well functioning across the dimensions of holistic health and *simultaneously* experiencing low rates of burnout symptoms. However, an average of 9 percent of employees are "stretching"—well functioning across the dimensions of holistic health and simultaneously experiencing high rates of burnout symptoms. Almost a third of employees are "managing"—experiencing suboptimal functioning across the dimensions of holistic health and experiencing low rates of burnout symptoms. The group struggling the most are those employees who are "drowning"—experiencing suboptimal functioning across the dimensions of holistic health and high rates of burnout symptoms. Exhibit 5 shows the percentage of employees that can be improved by simultaneously addressing demands and building enablers for employees. We call this the opportunity gap.[15]

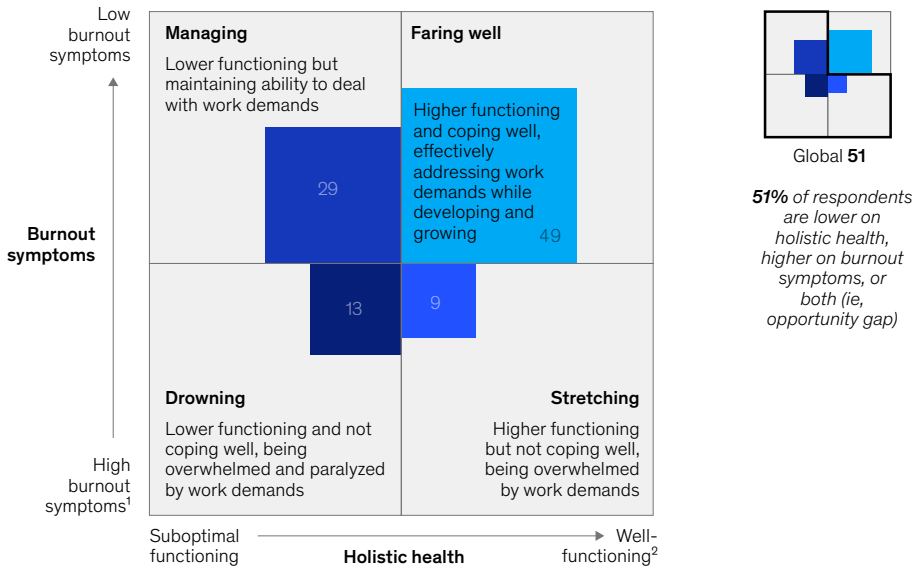
Looking at holistic health and burnout symptoms together could help employers in different sectors better differentiate the true drivers of outcomes. For

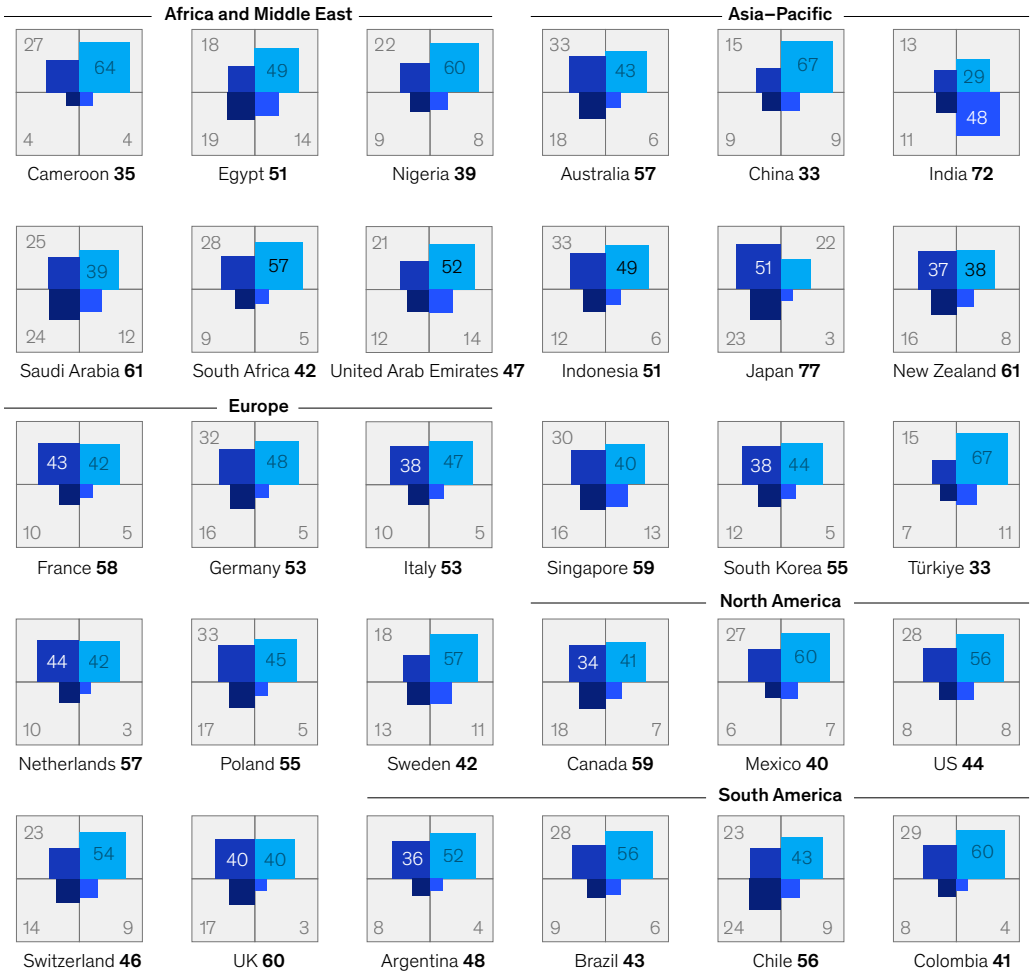
[11] This value represents the percentage of respondents scoring an average of more than 3 (on a scale of 1–5) across all four dimensions of burnout symptoms (cognitive impairment, emotional impairment, exhaustion, and mental distance) on the Burnout Assessment Tool.
[12] As mentioned previously, results need to be interpreted in relevant cultural context.
[13] In total, our model predicts 69 percent of the variance in burnout symptoms.
[14] Holistic health is negatively correlated with burnout symptoms, Pearson's $r = -0.33$.
[15] But again, these outcomes are also influenced by cultural differences in survey responses.

Exhibit 5

Simultaneously addressing burnout symptoms and holistic health could help employees across the spectrum of health.

Opportunity gap in addressing burnout symptoms and holistic health, % of respondents





Note: Figures may not sum to 100%, because of rounding.
[1]Data represent percentage of respondents scoring average of ≥3 (scale of 1–5) across all 4 dimensions of burnout symptoms (cognitive impairment, emotional impairment, exhaustion, and mental distance).
[2]Data represent percentage of respondents scoring average of ≥4 (scale of 1–5) across all 4 dimensions of health (mental, physical, social, and spiritual).
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

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example, physicians, nurses, teachers, and others in the social or healthcare sectors often report finding meaning in their work, yet often also report high rates of burnout symptoms and consideration of leaving their jobs.[16]

Driving organizational, team, and individual action—where to start?

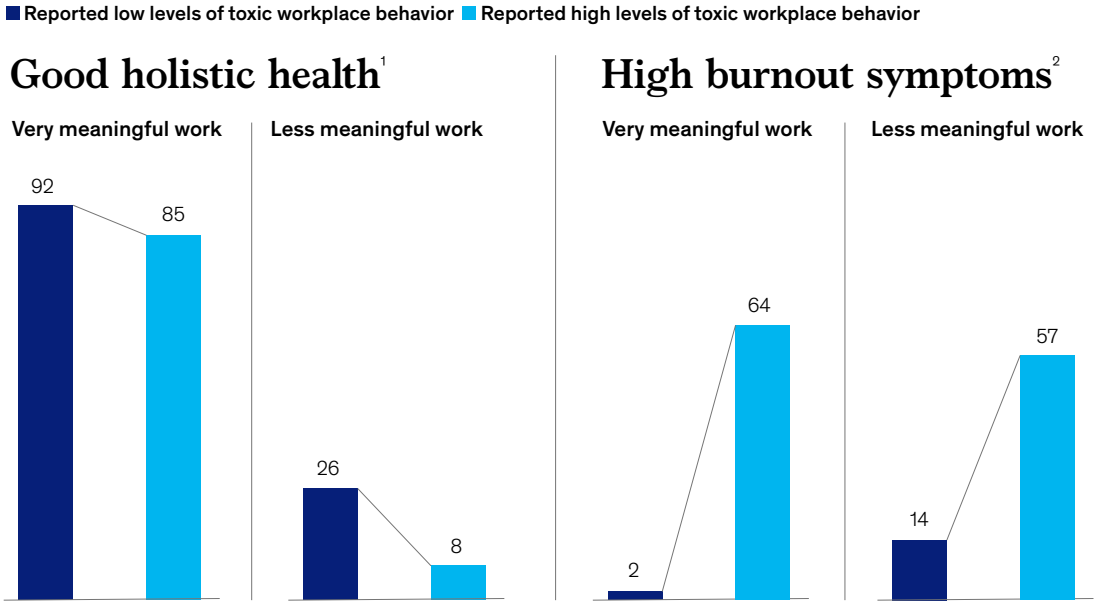
We uncovered drivers that are most strongly associated with positive and negative employee health outcomes. Our research insights suggest a set of actions addressing the workplace demands that fuel poor health and those that build up the workplace enablers to help employees thrive.

Workplace factors at the individual, team, and job levels have the strongest influence on holistic health. In our model, workplace factors at the individual level predict 28 percent of differences between employees on holistic health, while those

Exhibit 6

Meaningful work buffers the effect of toxic workplace behavior on holistic health but isn't sufficient to stop burnout symptoms in a toxic environment.

Reported good holistic health and high burnout symptoms, by work meaningfulness, % share



Note: "Low" refers to bottom 25% of respondents; "high" and "good" refer to top 25% of respondents.
[1]Statistically significant relationship between experiencing toxic workplace behavior and holistic health, moderated by meaningful work.
[2]Statistically significant relationship between experiencing toxic workplace behavior and burnout symptoms, moderated by meaningful work.
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

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[16] Gretchen Berlin, Ani Bilazarian, Joyce Change, and Stephanie Hammer, "Reimagining the nursing workload: Finding time to close the workforce gap," McKinsey, May 26, 2023; Jake Bryant, Samvitha Ram, Doug Scott, and Claire Williams, "K–12 teachers are quitting. What would make them stay?," McKinsey, March 2, 2023.

at the job level predict 21 percent, team level 39 percent, and the organization level 12 percent.[17]

Comparatively, when looking at employees on burnout symptoms, in our model, workplace factors at the individual level predict 3 percent of differences between employees on burnout, while those at the job level predict 62 percent, team level predict 32 percent, and the organization level predict 1 percent. Ninety-four percent of the explained variance is driven by factors at the job and team levels.

Employees who find their work meaningful more often report having better holistic health, even when they tolerate toxic workplace behaviors. But there is a limit. While holistic health can be maintained in a highly toxic work environment if an employee finds their work meaningful, meaningful work doesn't protect against burnout symptoms in highly toxic environments (Exhibit 6). Furthermore, when employees experience toxic behavior at work, their holistic health scores are 7 percent lower and they report a 62 percent higher rate of burnout symptoms.

In simple terms, if employers want to improve holistic health, they need interventions at all four levels (individual, job, team, and organization). If employers want to reduce immediate negative outcomes such as burnout, then focusing interventions at the job and team levels are the best place to start.

Consider an employee who may be described as "rolling with the punches" or "able to handle what we throw at her." Those can manifest as self-efficacy and affective adaptability, both of which are the top two drivers of holistic health—meaning they are unique workplace factors that can improve holistic health in a targeted way. When employees have self-efficacy, they feel confident they can deal efficiently with unexpected events or handle unforeseen situations thanks to their resourcefulness. They feel they can remain calm when facing difficulty because they can rely on their coping abilities.

Employees with adaptability can stay relaxed even if they must change plans, get energy from unexpected changes, enjoy it when their situation changes, and enjoy unexpected events. It should be no surprise that when challenges or uncertainty arise, these employees fare better in terms of health—an effect also seen in our previous research on burnout.[18] Employees with self-efficacy or adaptability skills report better holistic health, regardless of which demands they face (for example, high role ambiguity), perhaps because they are more capable of transforming challenging situations into opportunities. These are trainable skills that can be developed.[19]

While self-efficacy can help maintain an employee's overall sense of holistic health in a stressful environment, there is, again, a limit to which one can protect their health in these situations. While confidence in one's ability to perform can protect their sense of holistic health, it doesn't protect them against experiencing burnout symptoms in highly stressful environments (Exhibit 7). These findings suggest the best place for organizations to start may be addressing demands and building enablers for employees at both the team and job levels simultaneously.

It's important to note that *some* ebb and flow of demands and enablers within an organization is inevitable. When committing to long-term change, it's reasonable that organizations will undergo some episodic demands: for example, a seasonal rush at a retailer may create more short-term demands in an organization. Other organizations may have

[17] To clarify: job and organization-level demands and enablers are often tackled at the organizational level; the fact that organization-level impact is lower in our model has multiple reasons: (a) we look at the outcomes through the lens of the employee and expect more proximal demands and enablers to have a more direct effect on a proximal outcome; (b) we expect organizational-level demands and enablers to possibly have a more indirect effect or to be mediated by more proximal factors; (c) therefore, we focused our model primarily at team, job, and individual levels to find the most direct impact. For more, see Emily Field, Bryan Hancock, and Bill Schaninger, "Middle managers are the heart of your company," *McKinsey Quarterly*, July 17, 2023.

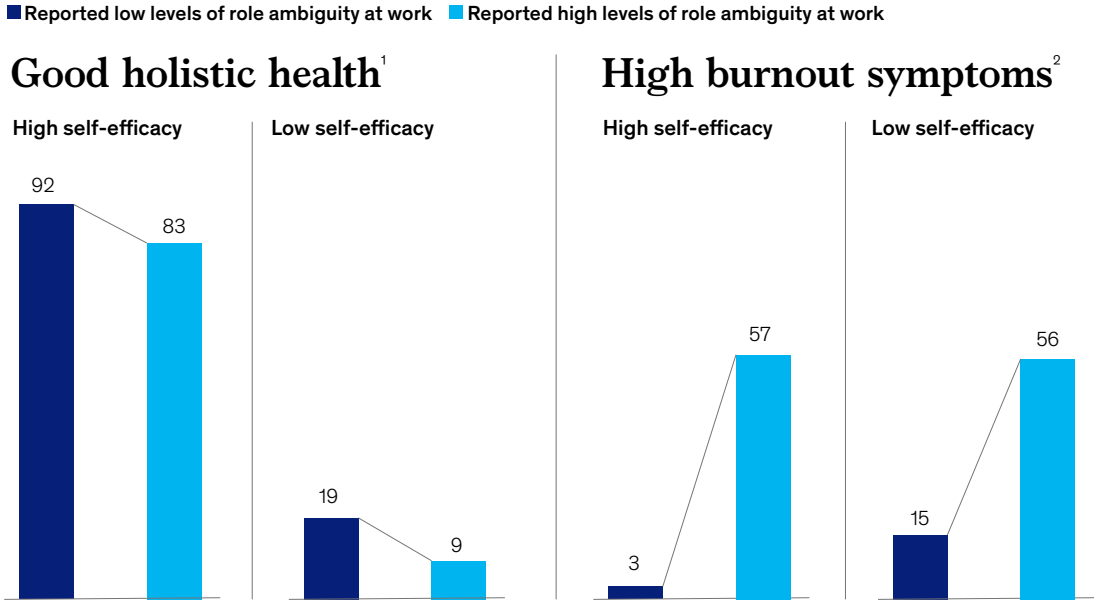
[18] "Addressing employee burnout: Are you solving the right problem?," McKinsey, May 27, 2022.

[19] Jacqueline Brassey et al., "Emotional flexibility and general self-efficacy: A pilot training intervention study with knowledge workers," *PLoS One*, October 14, 2020, Volume 15, Issue 10; Jacqueline Brassey, Aaron De Smet, and Michiel Kruyt, *Deliberate Calm: How to Learn and Lead in a Volatile World*, New York, NY: HarperCollins, 2022.

Exhibit 7

Self-efficacy buffers the effect of role ambiguity at work on holistic health but isn't sufficient to stop burnout symptoms in an ambiguous environment.

Reported good holistic health and high burnout symptoms, by self-efficacy at work, % share



Note: "Low" refers to bottom 25% of respondents; "high" and "good" refer to top 25% of respondents.
[1]Statistically significant relationship between role ambiguity at work and holistic health, moderated by self-efficacy.
[2]Statistically significant relationship between role ambiguity at work and burnout symptoms, moderated by self-efficacy.
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

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challenging teammates on temporary assignments. The MHI Holistic Health framework[20] takes this into account, exploring how multiple levels of influence can encourage positive action around employee health and well-being—organizational, team, job, and individual—and emphasizes how overweighting on only reducing demands or building enablers, over the long run, can affect employee health.[21] (For more on understanding work location and employee health, see sidebar "Does work location influence health outcomes?")

Employers must commit to supporting employees to move from ill health to positive holistic health

In this article, MHI has presented a compelling case for organizations to reduce employee burnout symptoms and increase holistic health. Our research suggests team- and job-level demands and enablers are the place to start for improving employee health within an organization (see sidebar "Designing interventions to improve holistic health"). As employers develop strategies to fuel employee health and well-being, beyond focusing only on addressing poor mental health amid a challenging

[20] Grounded in contemporary academic research, expanded with new concepts and psychometrically validated.
[21] Organizational effects include actions from the company/senior leaders; team-level effects include actions from managers/peers; job-level effects include aspects of an employee's job; individual-level effects include characteristics of the employees themselves.

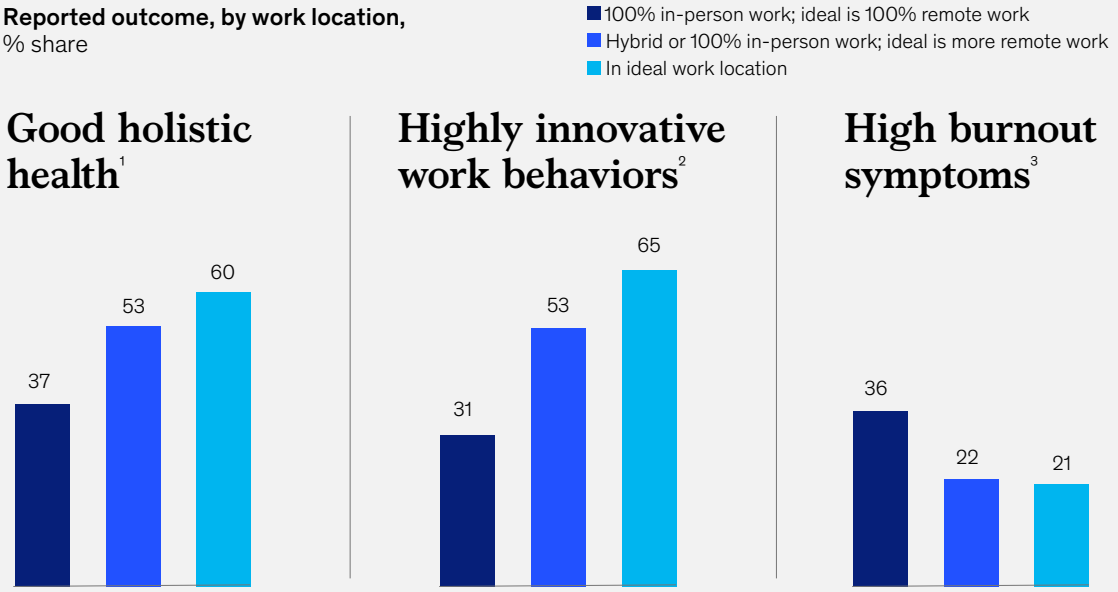
Does work location influence health outcomes?

Our research indicates that when employees are working in their preferred work locations, they have better holistic health, lower burnout symptoms, and are more innovative at work. As the size of this gap between where they're *currently* working and where they *ideally* want to be working increases, these effects are stronger, with larger gaps indicating lower health and innovation for employees (exhibit).

Exhibit

Respondents in ideal work locations report more positive holistic health, more innovative work behaviors, and lower burnout symptoms than peers do.

Reported outcome, by work location, % share



[1]Data represent percentage of respondents scoring average of ≥4 (scale of 1–5) across all 4 dimensions of health (mental, physical, social, and spiritual).
[2]Data represent percentage of respondents rating themselves in top 25%.
[3]Data represent percentage of respondents scoring average of ≥3 (scale of 1–5) across all 4 dimensions of burnout symptoms (cognitive impairment, emotional impairment, exhaustion, and mental distance).
Source: McKinsey Health Institute Employee Holistic Health Survey, 30,392 participants at all levels of the organization, Apr–Jun 2023

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macroeconomic environment, it may be useful to examine how to support health at four different levels within an organization:

— *Organization:* Organizational-level resources are often needed to support team-, job-, and individual-level interventions—and investment in holistic health must be supported by executives to have an effect. For example, interventions that encourage team members to act positively toward each other may fail if an organizational culture and performance system normalizes mistreating colleagues.

Second, job redesign starts from the top—while managers can help employees in job crafting and shaping, organizations that have policies that don't support rotations or lateral mobility within an organization can undermine the effects of such interventions. Finally, while jobs should

Designing interventions to improve holistic health

Improving holistic health at work can start with the following interventions:

— *Understand the current state of holistic health in your organization.* Establish a baseline for employee health and well-being, including identifying specific opportunity areas, before investing in targeted initiatives. This will ensure that the impact of your investments can be measured and that you are focusing on the areas producing real results. This can be done using existing surveys if they are scientifically sound. The McKinsey Health Institute's (MHI's) Employee Mental Health and Well-being assessment (available on our Employee Health Platform) is one option which is fully psychometrically validated and free of charge to deploy.

— *Develop a comprehensive intervention strategy.* Ensure that your organization invests in interventions that *proactively address demands* before employee health and well-being become an issue, and *provide reactive support* once they have already taken a negative turn. For example, offering additional days of leave for colleagues experiencing mental health emergencies can be helpful, but it does nothing to avoid the escalation of mental health challenges in the first place—especially if those challenges are aggravated by workplace factors. Interventions should also target *all levels of the organization*, with a focus on teams as the primary body that influences workplace experience. Many companies overindex on interventions targeting individual employees, putting additional responsibility on them to manage their holistic health on top of existing workplace demands. For example, providing employees with access to a meditation app is a valid intervention to support mental health, but it doesn't address structural issues in the workplace or within team dynamics that may compromise it in the first place.

— *Implement and track your intervention strategy.* Start with a pilot group to test an intervention's effectiveness before committing to a full-scale rollout. We recommend using the same survey used to baseline the organization to retest the pilot group a few months after deploying the intervention. This allows you to clearly measure the intervention's impact on the opportunity areas identified through the baseline assessment before deciding if it's worth rolling out to the rest of the organization. It's critical to track how your organization performs against clear outcomes over time to monitor improvement and justify your organization's continued investment in your intervention strategy. Choose a senior level leader with accountability to deliver the intervention (preferably someone other than the chief human resource officer) to link your intervention strategy to the business and support successful implementation.

— *Ensure holistic health is part of how your organization defines success.* Once employee health is a part of your organization's value proposition, it should be backed by measures to ensure the organization stays accountable. This can take the form of management KPIs, nonfinancial reporting, or internal incentive structures. For example, management incentives and career development should be aligned with the holistic health outcomes of their teams. Likewise, leaders should model the organization's values and working norms to support lasting change. All leaders should be able to communicate why and how they are embracing a modern understanding of health to convince employees they are truly "walking the talk." This requires substantial investment and patience to see the results, as well as buy-in from leaders. However, our research indicates real long-term value regarding employee work-related outcomes. Research also indicates financial outperformance for companies prioritizing employee well-being.[1]

[1] Jan-Emmanuel De Neve, Micah Kaats, and George Ward, *Workplace wellbeing and firm performance*, University of Oxford Wellbeing Research Centre working paper, number 2304, May 12, 2023.

be designed with adequate compensation and benefits in mind, organizations are ultimately responsible for funding and delivering on these employee benefits.

Some examples of organizational-level actions include enrolling in living wage programs, pledging to ensure base pay is sufficient for all employees to cover their basic needs,[22]

[22] Living wage programs exist across different countries, including Canada, the United Kingdom, and the United States.

offering financial programs in which employees can receive part of their pay prior to payday, providing access to remote medical care, or offering additional support or leave time for parents and caregivers.

— *Team:* Our research highlights the important role team dynamics play in health and well-being—often the responsibility of managers and team leads. Team leaders should be trained appropriately and enabled to create healthier workplaces. In turn, they should then be held accountable for the ways they interact with others on their team and within the organization, the way their team members interact with each other, and they must intervene when employees treat each other negatively.

  Interventions that promote positive behaviors and limit negative ones can help to build a team and organizational climate that promotes holistic health. Such interventions include but are not limited to manager trainings on creating psychologically safe environments and conflict resolution skills,[23] implementing anonymous HR reporting systems,[24] and incorporating confidential upward feedback on leadership behaviors and team well-being as input for performance reviews and promotions.[25]

— *Job:* Job redesign or fine-tuning for sustainable work is one of the most direct ways to reduce demands at the job level, where organizations rearrange tasks with the goal of helping employees maintain their efficiency and health over time. This is often led by or facilitated from the top.

  A broad range of additional interventions can help organizations set sustainable working norms. These include setting maximum working hours (per day, per week),[26] limiting work communications to certain hours of the day, and providing multiple start times or self-scheduling options for shift workers. For example, Shopify recently canceled all recurring meetings of three or more people in their organization as a reset to ensure intentionality of recurring meetings and to make time for focused work.[27]

  Another consideration for job design is whether those in certain roles are provided with adequate pay and benefits to cover their basic needs. Our research shows that those who can't meet their basic needs with their pay feel more financially insecure and less holistically healthy than those who feel they are sufficiently paid. Employers may also examine what is covered for employees by health insurance, either public or private, and what requires out-of-pocket expenses.

— *Individual:* Our research shows that having meaningful work is one of the key drivers for holistic health. Organizations can support their employees to find meaning in their work by being mission-driven, integrating their purpose into their business strategy and throughout the whole organization. Patagonia, for instance, focuses on hiring employees who are excited about the mission of "Patagonia is in business to save our home planet."[28]

  Involving employees in customizing their roles and careers—for example, through job crafting—has also been found a strong way to motivate, build capabilities, and help employees find meaning in the work they do. Other examples are capability training to help develop self-confidence and adaptability skills. Last but not least: middle managers of today and tomorrow will have an increasing pivotal role for business

[23] For example, Sempra provides psychological safety training to all employees alongside respect and anti-harassment modules, while Capgemini implemented dispute resolution training for HR and managers.
[24] For example, Ford Foundation provides a 24/7 EthicsPoint hotline to anonymously report concerns, complaints, or misconduct.
[25] For example, McKinsey employs an upward feedback tool at the end of projects to ensure that leaders uphold healthy work practices.
[26] This standard is sometimes also driven or initiated by national policies and local labor laws.
[27] Kaz Nejatian, "Shopify exec: This is what happened when we canceled all meetings," *Fast Company*, May 16, 2023.
[28] Nell Derick Debevoise, "Why Patagonia gets 9,000 applications for an opportunity to join their team," *Forbes*, February 25, 2020; Yvon Chouinard, "Earth is now our only shareholder," Patagonia, accessed October 2023.

success,[29] helping them get better equipped for the new world of work—including as people leaders—is not only nonnegotiable, it will also support fostering a supportive growth culture that builds employees' holistic health.

Employers have more power for positive outcomes than they know

Enabling a healthy workforce is no longer a luxury but rather a strategic imperative for organizations to navigate turbulent times in an ever more complex society. To seize the opportunities presented by employee health and well-being, employers must recognize their role. By agreeing to create workplaces where employees can thrive, organizations can prioritize holistic health as an important outcome that potentially aligns with an organization's broader environmental, social, and governance (ESG) framework. Employers can take action by understanding how demands and enablers affect employees at various levels: organizational, team, job, and individual. As ESG metrics are increasingly used by investors as a decision measure for where to allocate their capital, we expect more research that could link employee well-being to financial performance.[30]

To truly understand what moves the needle on employee health, organizations should take a systemic approach to employee health that considers demands and enablers of employees, but also how they can design interventions at the organizational, team, job, and individual levels. For organizations, it's no longer enough to consider employee health a soft metric. Rather, executives should consider employee health a part of leading by example, showing how better health and better business practices can allow everyone to flourish.

If you would like to learn more about the McKinsey Health Institute Employee Holistic Health Survey, our Employee Health Platform and the additional data and insights MHI has from the survey, please submit an inquiry via the MHI "contact us" form. The McKinsey Health Institute, as a non-profit-generating entity of McKinsey, is creating avenues for further research that can catalyze action.

[29] "Middle managers are the heart of your company," July 17, 2023.
[30] Alex Edmans, "The link between job satisfaction and firm value, with implications for corporate social responsibility," *Academy of Management Perspectives*, November 2012, Volume 26, Issue 4.

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The authors wish to thank Alistair Carmichael, Erica Coe, Hans de Witte, Kana Enomoto, Arne Gast, Katy George, Renata Giarola, Roxy Merkand, Hannah Mirman, Kim Rubenstein, Izzy Savage, Wilmar Schaufeli, Gretchen Scheidler, Ralf Schwarzer, Curtis Stecyk, Berend Terluin, Karen van Dam, Marieke van Hoffen, and Arjen van Witteloostuijn for their contributions to this article.

Conversations on Health

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'Older workers are good for business': AARP CEO Jo Ann Jenkins

Young children are experiencing trauma: How *Sesame Street* wants to help: Jeanette Betancourt

The power of caring adults: Nicole Carroll on overcoming childhood trauma

'Make the healthy choice the easy choice': Dame Sally Davies

'Stay grounded, stay humble': Sanofi CEO Paul Hudson

December 2023

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