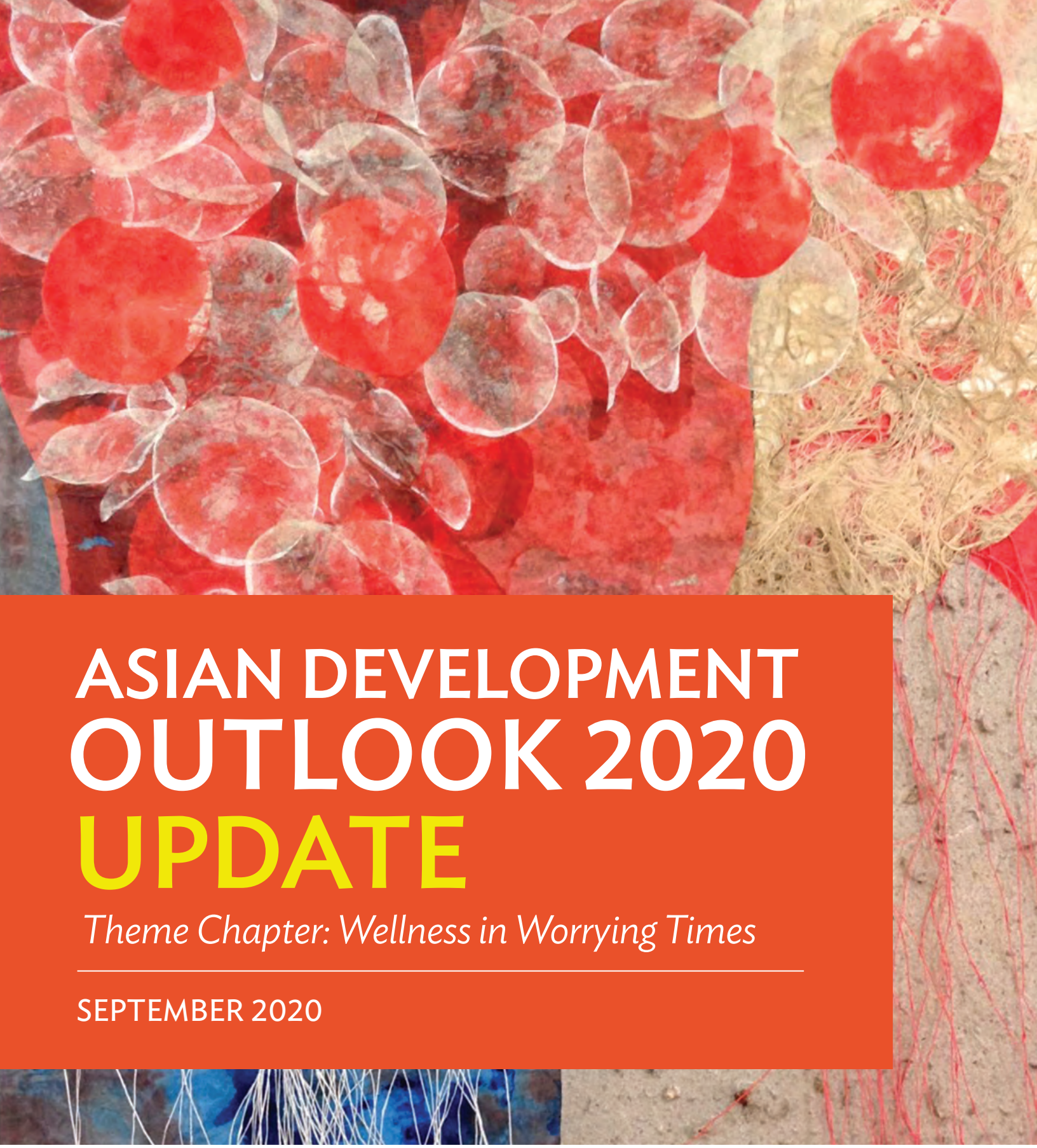

ASIAN DEVELOPMENT OUTLOOK 2020 UPDATE

Theme Chapter: Wellness in Worrying Times

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Wellness in worrying times

Wellness is vital for post-pandemic recovery in developing Asia. Coronavirus Disease 2019 (COVID-19) removes any doubt that wellness—or the deliberate pursuit of activities that bring holistic health, happiness, and well-being—is essential to all, not just an indulgence for those who can afford it. Public health, both physical and mental, has taken a beating during this pandemic. In Asia, as elsewhere, wellness can revive the human body, mind, and spirit, which are the first steps toward rebuilding the economy and society.

Wellness is a large and growing part of the Asian economy. Even before COVID-19, Asians demanded more wellness as their incomes rose, chronic lifestyle diseases became more prevalent, and the population aged. A result has been a rapidly growing wellness economy, comprising industries that enable consumers to incorporate wellness activities into their daily lives. The wellness economy provides 11% of output in Asian countries, having grown annually by 10% in recent years. COVID-19 is likely to further boost demand in the coming years and support a strong recovery.

Asian wellness traditions can serve both well-being and the economy. Although modern wellness industries originated in Western countries, Asia has a wealth of wellness traditions. Those traditions are productive assets for the wellness economy. At the same time, tapping these traditions can promote mental and physical health in the lives of Asians. As such, the present is the opportune time for Asia to rediscover its wellness roots.

Wellness polices should be comprehensive and target all Asians. Government efforts to boost physical and mental well-being fall into four policy domains: create a healthy urban environment, enable and support physical activity, encourage healthy diets, and enhance wellness in the workplace. Because healthy aging begins in childhood, a lifelong wellness policy framework such as Japan's 100-Year Life Program should complement the four policy domains. And, because the poor have fewer opportunities for wellness activities, governments must invest in wellness infrastructure that benefits them.

This chapter was written by Donghyun Park, Matthias Helble, Madhavi Pundit, Pilipinas Quising, Irfan Qureshi, and Shu Tian. It draws on the background papers listed at the end of the chapter. Strategic advice was provided by Gerry Bodeker, Katherine Johnston, and Ophelia Yeung. Other contributions are listed in the Acknowledgments section.

1 A pandemic brings wellness to the fore

Coronavirus Disease 2019 (COVID-19) highlights the importance of both physical and mental health. Medical evidence indicates that individuals with underlying physical health conditions such as obesity, asthma, or diabetes face a much higher risk of severe infection, as do the elderly. Meanwhile, isolation, fear, uncertainty, and economic hardship triggered by the pandemic are causing psychological stress and anxiety around the world. A United Nations report released in May 2020 warns that pandemic-induced mental distress may trigger a global mental health crisis. This bolsters the case for individuals to take action to strengthen their own physical and mental health by pursuing wellness activities.

Developing Asia is relatively easy to nudge in this direction. Demand for wellness was growing across the region even before the pandemic as populations aged and in response to the rising incidence of chronic lifestyle diseases. While the idea of wellness has grown in popularity, people may not understand exactly what it means. How does wellness differ from happiness and well-being?

1.1 Wellness defined

Wellness was an unfamiliar concept just a decade ago, but in the past few years it has spread all around the world. Consumer interest in all things related to wellness is accelerating, and wellness has become a selling point for many products and services—from food and vitamins to real estate and vacation packages, and from gym memberships and health care plans to meditation apps and DNA testing kits. The global wellness economy was worth an estimated $4.5 trillion in 2018 alone (GWI 2018a, 2019). That consumers in developing Asia are increasingly interested in wellness is evident in the proliferation across the region of fitness centers, spas, and tai chi and yoga classes.

Wellness is a modern word with ancient roots. It has emerged only recently as an industry but has existed for thousands of years as a concept and practice. The key tenets of wellness, which promote health care that is both preventive and holistic, can be traced back to ancient civilizations spanning East to West. Ayurveda—an ancient health care system described more than 2,000 years ago in sacred Hindu texts—strives to create harmony of body, mind, and spirit (Guha undated). Traditional Chinese medicine, another of the world's oldest systems of medicine, is influenced by Buddhist and Taoist philosophies and includes in the concept of health the individual's harmonious relationships

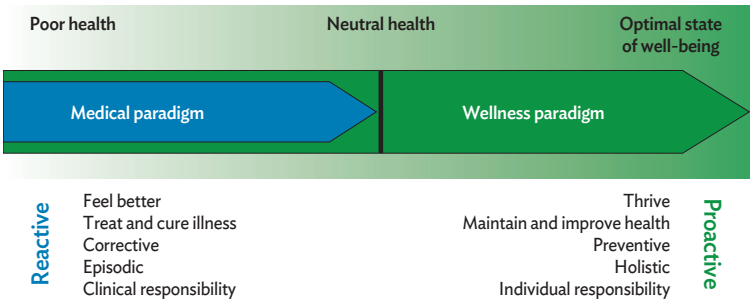
with the family, community, and environment (Hafner undated). The ancient Greek physician Hippocrates was the first member of the medical profession recorded as emphasizing disease prevention. His wellness concept is captured in the modern Hippocratic Oath: "I will prevent disease wherever I can, for prevention is preferable to cure (Tyson 2001)."

Around the world, the popular understanding and usage of the word wellness may vary according to cultural, historical, and linguistic differences. In Europe, for example, wellness is often associated with spas, health resorts, seawater-based thalassotherapy, and other types of alternative treatments offered at such facilities. Many Europeans use the term well-being to mean holistic health. In Asia, many ancient spiritual traditions, healing modalities, and life philosophies—including yoga, ayurveda, traditional Chinese medicine, tai chi, reiki (energy healing), meditation, herbal medicines, and ikigai (Japanese "reason for being")—are deeply ingrained in culture and daily life. However, these activities may not be associated in Asia with wellness, as they are in the West. For example, the Chinese concept closest to wellness is *yangsheng*, which means "looking after one's health" or "keeping fit," but the word wellness is generally translated into Chinese as a synonym of "health."

As the popularity of wellness practices has grown in recent years, diverse understanding and usage of the term wellness have gradually converged on a universal definition, one closely related to and complementary with health. Since 1948, the World Health Organization has defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO 1948). This definition is significant for going beyond the physical state of simply being free of disease, emphasizing a holistic approach that includes social and mental dimensions.

However closely related they may be, wellness and health are distinct concepts, as evident in a comparison of the medical and wellness paradigms (Figure 1.1). The medical paradigm is reactive and seeks to help individuals recover from poor health to neutral health. In contrast, the wellness paradigm is proactive and seeks to lift individuals from neutral health to optimal health.

Figure 1.1 Medical paradigm versus wellness paradigm



Source: Global Wellness Institute.

While the two paradigms overlap in preventive health care, much of medical care treats and cures illness, while wellness focuses on behavior—most iconically exercising, eating healthy food, and perhaps meditating—that allow one to achieve better health.

In contrast with related concepts such as happiness and well-being, which are subjective conditions, wellness is to a process through which one actively makes choices that bring optimal health. Following the definition from the Global Wellness Institute, wellness can best be understood as "the active pursuit of activities, choices, and lifestyles that lead to a state of holistic health" (GWI 2018a). It extends beyond physical health and incorporates many different dimensions: mental/intellectual, emotional, spiritual, social, and environmental. Figure 1.2 summarizes the similarities and differences between wellness on the one hand and well-being and happiness on the other. Figure 1.3 illustrates the multidimensional nature of wellness.

Figure 1.2 Wellness versus well-being and happiness

Wellness	Well-being and happiness
Both are multidimensional, dynamic, subjective, and personal yet subject to historical and cultural differences and contexts	
• Relates to intention, action, and activities. • Has a prominent physical dimension. • Is associated by consumers with healthy lifestyles, choices, and market offerings. • Is commonly used in the context of business and private industry, such as the wellness industry. • Is a useful concept for measuring industry size and discussing business opportunities in the wellness economy.	• Are perceptions of states of being. • Have prominent mental and emotional dimensions. • Are associated by community members with feelings of satisfaction and a sense of fulfillment. • Are commonly used in the context of government and policy, such as a well-being budget. • Are useful for measuring the welfare of individual residents, such as with the Global Happiness Index, and organizing policies and interventions.

Source: Global Wellness Institute.

Popular understanding of the word wellness may vary around the world in line with cultural, historical, and linguistic differences. While usage of the term may differ, common threads stand out in the definition of wellness. They can be summarized as follows:

- **Wellness is multidimensional.** It incorporates physical, mental, emotional, social, and other aspects of an individual.
- **Wellness is holistic.** Each dimension influences the other dimensions of wellness, and they must work in harmony.
- **Wellness changes along a continuum over time.** It is not a static state or an end point, but is experienced as a continuum along which an individual attempts to move toward an optimal sense of health and well-being.

Figure 1.3 Different dimensions of wellness

Source: Yeung and Johnston 2020a.

- **Wellness is both individual and environmental.** It depends upon individual choices, behavior, and lifestyle but is also significantly influenced by the physical, social, and cultural environment in which people live.
- **Wellness entails personal responsibility.** It requires individuals to be aware and proactively make choices that enable better health and well-being.

1.2 COVID-19 and wellness

COVID-19 is a once-in-a-century shock to global health and the world economy, unprecedented in living memory. It underscores the importance of physical and mental wellness in a number of ways. Most notably, medical evidence indicates that unfit and unhealthy individuals are significantly more vulnerable to the disease. Keeping fit and healthy through regular exercise and other physical activity boosts immunity against infectious diseases. Social isolation during lockdowns and community quarantines can impair people's sense of mental well-being. Activities such as deep breathing exercises or meditation can help them regain their mental balance (Mayo Clinic 2020, Harvard Health Publishing 2020). Other activities such as eating healthier food and practicing yoga can enhance both physical and mental well-being. Demand for wellness has been growing across the region, and heightened awareness of the benefits of being and staying well against the backdrop of a pandemic will likely give further impetus to the pursuit of wellness activities.

Importance of physical health

Living under COVID-19 restrictions highlights the importance of being physically fit and healthy, which helps prevent infection. In addition, physical fitness mitigates mental health issues stirred by worry and stress. Therefore, in addition to taking preventive measures such as wearing a face mask, washing hands frequently, social distancing, and self-isolating, individuals need to safeguard their overall physical health through physical wellness activities.

The evidence to date shows that people with underlying medical conditions such as cardiovascular disease, diabetes, chronic respiratory disease, and cancer face a higher risk of severe illness from COVID-19 (WHO 2020a, Huang et al. 2020, Wang et al. 2020, Yang et al. 2020, Liang et al. 2020). Obesity is identified as another major risk factor (CDC 2020). In many cases, these conditions are caused by harmful behavior—smoking, excessive drinking, and overeating—and can be prevented by lifestyle changes such as starting a proper diet and regular physical activity.

Community lockdowns and quarantines implemented to contain COVID-19 discourage physical activity and impose greater reliance on processed and canned food, which may increase the risk of metabolic disease (Jiménez-Pavón, Carbonell-Baeza, and Lavie 2020, Narici et al. 2020). A study of children and adolescents aged 6–17 years in five schools in the People's Republic of China revealed a substantial decrease in physical activity and an increase in internet screen time during the COVID-19 pandemic, causing obesity and eye disease (Xiang, Zhang, and Kuwahara 2020). Studies have long linked reduced physical activity and prolonged sedentary behavior to poor physical and mental health (Korczak, Madigan, and Colasanto 2017, Haapala, Vaisto, and Lintu 2017, WHO 2010). Equally well established are the beneficial effects on health from regular physical activity (Pedersen and Saltin 2015, Powell, Paluch, and Blair 2011).

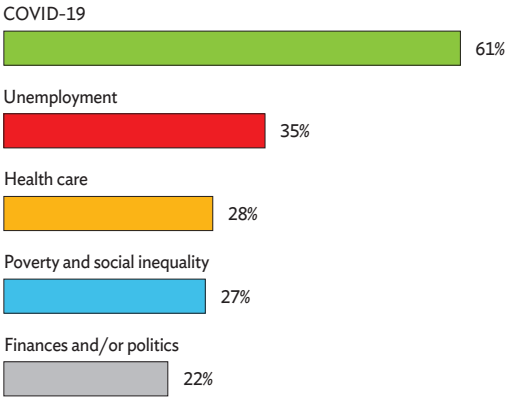
Wellness activities like getting good nutrition and adequate sleep, exercising regularly, and meditating play important roles in preventing COVID-19 infection and recovering from it. Potentially long-lasting scars from the disease strengthen the case for wellness practices during recovery (Mintz 2020, Parshley 2020, Wu et al. 2020). COVID-19 survivors need healthy nutrition, good care, and engagement in wellness activities to recover fully and put their lives back on track.

Mental health in a pandemic

The COVID-19 pandemic is, first and foremost, a physical health crisis arising from a virus, but it has the potential to evolve into a mental health crisis as well. In fact, various surveys and studies already document significant negative psychological consequences from COVID-19 around the world. A survey of 28 countries showed COVID-19 dominating the concerns of global citizens (Figure 1.4). The pandemic's response score was the highest recorded since the survey started 10 years ago, which suggests that COVID-19 has become a uniquely dominant global concern. In opinion polls conducted in individual countries including Canada, the United Kingdom, and the US, respondents reported their mental health suffering from worries and stress over COVID-19 (Angus Reid Institute 2020, Office for National Statistics 2020, National Public Radio 2020, Morning Consult 2020).

More broadly, COVID-19 is a startling global crisis that is hammering both public health and the economy. From the perspective of individual mental well-being, health fears concerning infection, death, and the loss of family members may be compounded by stress over economic hardship from lost or endangered jobs and income (Haushofer and Fehr 2014).

Figure 1.4 Top five global concerns



COVID-19 = Coronavirus Disease 2019.

Note: Research conducted in April 2020 among adults aged 16–64 in 28 participating countries.

Source: Atkinson, Skinner, and Gebrekal 2020.

Online surveys revealed anxiety to be the most common mental health symptom, often so intense that impairs sleep (Xiao et al. 2020, Rossi et al. 2020, Liu et al. 2020). Some contributory factors were poor physical health (Wang et al. 2020), forced responses to the pandemic in daily life (Rossi et al. 2020), misinformation and high exposure to social media (Zandifar and Badrfam 2020, Gao et al. 2020), and quarantine or social isolation (Rossi et al. 2020, Zandifar and Badrfam 2020). Many hospital staff, including frontline medical personnel, face mental health issues (Kang et al. 2020, Tan et al. 2020, Xiao et al. 2020, Zhang et al. 2020). Reasons cited include overly long work hours, risk of infection, lack of personal protective equipment, loneliness, physical exhaustion, and separation from families.

Individuals have many options for maintaining mental health during and beyond the pandemic: sustaining healthy everyday habits such as eating well, exercising regularly, and keeping in touch, if only online, with family and friends. Specialized wellness practices such as meditation, tai chi, and yoga can also benefit mental health (Bodeker et al. 2020).

1.3 Wellness and sustainable development

Even before COVID-19, demand for wellness in developing Asia had been on the rise in response to structural factors: higher incomes, the emergence of a large middle class, increased urbanization, and a rise in chronic lifestyle conditions referred to as noncommunicable diseases or NCDs (Box 1.1). Decades of rapid economic growth have left many Asians much richer than their forebears. Consequently, they are more aware of the benefits of healthier lifestyles as, most starkly, hunger for more calories gives way to a quest for better, more balanced nutrition. The rise of NCDs such as heart disease, stroke, diabetes, and cancer in the region is encouraging Asians to exercise more, eat better, and seek healthier life choices. In addition, Asia's population is aging. Older populations are more subject to chronic disease, as well as to loneliness and mental health issues. Asia's worsening pollution presents yet another clear and present danger to health. Heightened awareness of the importance of wellness during the COVID-19 pandemic will thus reinforce Asia's growing demand for wellness.

Wellness can contribute to sustainable development and improve the mental and physical health of the poor. As the active pursuit of well-being, wellness aligns with the United Nations Sustainable Development Goals, in particular the third goal: Ensure healthy lives and promote well-being for all at all ages. A focus on wellness promises to bring a more balanced and holistic view of development than does measuring its progress simply as increased income per capita.

In principle, many wellness activities such as physical exercise are available to all. In practice, though, the poor are disadvantaged by their relative lack of money or time to devote to wellness, of access to health facilities, and of ready knowledge of nutritious food. These gaps can be narrowed by public investment in wellness infrastructure in poor neighborhoods such as community recreation centers and green parks, as well as in health education campaigns.

Box 1.1 The rise of chronic lifestyle disease in developing Asia

Sustained economic growth in developing Asia has brought rapid urbanization and expansion of the middle class. The resulting lifestyle changes have contributed to the rise of noncommunicable diseases (NCDs) in the region. Such negative side effects of economic success encourage Asians to pursue healthier lifestyles that can improve their well-being.

A landmark in the growth of the middle class, September 2018 was the tipping point at which more than half of the global population, or 3.8 billion people, were now middle class or rich. Most of the new entrants to the middle class live in developing Asia (Kharas and Hamel 2018). Middle class consumers drive global economic growth with their large numbers and discretionary spending, not least to enhance the quality of life or search for fulfillment and happiness through good health, education, travel, entertainment, and experiences. The wellness economy has benefited from this growing consumer base.

A parallel development is rapid urbanization. In 2018, fully 55% of the global population lived in urban areas—a share that will reach 68% by 2050. Much of this growth will come in large developing countries such as India, Indonesia, and the People's Republic of China (United Nations 2018).

The twin phenomena of a growing middle class and urbanization have upended traditional lifestyles and aspirations pertaining to living arrangements, eating habits, physical activities, work, families, communities, values, tastes, and much more. This modern lifestyle has many unhealthy aspects, though, such as automobile dependency, excessive consumption of processed foods, sedentary lives, stress, loneliness and social isolation, and heightened exposure to pollutants. These changes are risk factors for chronic disease and therefore spur demand for wellness.

Most chronic lifestyle and environmental diseases are classified as NCDs, which, with improved control of infectious disease, have become leading causes of death, collectively responsible for 71% of them worldwide (Kharas 2017). More than three-quarters of NCD-related deaths globally occur in low- and middle-income countries (WHO 2018b). According to the World Health Organization, properly addressing these risk factors could prevent at least 80% of heart disease, stroke, and Type 2 diabetes, as well as 40% of cancer cases (WHO 2005). Consumers are becoming aware that they can reduce risk through physical activity, healthy diets, moderated use of tobacco and alcohol, stress-avoidance, and healthier lifestyles overall.

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Source: Yeung, O. and K. Johnston. 2020a. *Global Wellness Industry and Its Implications for Asia's Development*. ADB.

2 Contours of wellness in Asia

This section takes stock of the current state of wellness in developing Asia. An index constructed specifically to measure wellness ranked the region a little below the world average, with significant variation across regional economies. Further analysis to estimate the size of the wellness economy showed that wellness and related industries have been expanding rapidly in many Asian countries, increasing the segment's share of total output and making it an increasingly important driver of the regional economy.

2.1 Quantifying wellness: cross-country comparison

Gross domestic product (GDP) per capita has been used historically as the de facto measure of a country's success and well-being. While GDP captures material well-being, it often does not provide a comprehensive measure of wellness (e.g., Dowrick and Quiggin 1994). More recently, a clamor has arisen to use more holistic measures of well-being (Stiglitz, Sen, and Fitoussi 2009). One such measure is the Wellness Index, which follows the Global Wellness Institute definition of wellness with four pillars or dimensions: physical, intellectual, environmental, and social (Ahmad and Qureshi 2020).

The Wellness Index uses readily available, public data to create a cross-country ranking of wellness. The aim is to fill an important gap by estimating relative wellness across countries and measuring average individual wellness (Box 2.1). The index provides policy makers in particular with an important gauge of how effectively public interventions may have improved wellness in a country.

Figure 2.1 shows the global distribution of the Wellness Index, revealing large differences across countries and regions. Europe, North America, Australia, and New Zealand emerge as the top performers, and Latin America performs consistently well. Asia and Africa exhibit marked variance in wellness scores.

On average, developing Asia's wellness performance is close to the global average but typically falls below that of members of the Organisation for Economic Co-operation and Development (OECD) and of Latin America and the Caribbean (Figure 2.2). Evenly spread Asian rankings show the Republic of Korea and Singapore on top and Pakistan and Afghanistan at the bottom end.

Box 2.1 Wellness Index

The Wellness Index adopts a bottom-up approach, defining wellness at the individual level, which distinguishes it from other aggregate measures of national well-being. The index is broadly based on the Global Wellness Initiative definition of individual wellness, founded on four pillars: physical, intellectual (mental), environmental, and social. Physical wellness captures a nation's ability to meet the health needs of its populace, intellectual wellness measures access to education and its quality, social wellness considers the social environment, and environmental wellness addresses environmental health.

Because wellness is not directly observable, the index applies strict criteria to identify indicators to use as proxies for the four pillars. A selected indicator must be recent, reliable, and replicable, while keeping imputation to a minimum.

To guide data collection, the index focuses on 25 core countries of interest and uses an indicator only if applicable in at least 20 of them within the past 5 years. If an indicator is missing from a core country, time trend imputations are used to fill the gap. If this is not possible, limited cross-indicator imputations are used. This data collection strategy yields 20 indicators across 153 economies to create a global index of wellness. The box figure lists the indicators used to create the index.

Principal component analysis (PCA), a dimensionality reduction technique, is used to collate the data for each pillar. While the pillars of wellness are themselves unobservable, PCA allows ordinal ranking across economies by exploiting variance in related indicators. For instance, while physical wellness is unobservable, the Wellness Index uses variance in mortality rates and disease burden to rank countries by their average level of physical wellness, as countries with lower values in these indicators can be reasonably judged to have greater physical wellness.

Scores from pillar-level PCA are normalized and then averaged to create the index. The index thus connects macro-level development indicators with the national level of wellness. From a policy perspective, improved life expectancy, for example, can be expected to improve the wellness ranking.

Indicators for each pillar of wellness

Physical

1. Life expectancy at birth
2. Maternal mortality rate
3. Under-5 child mortality rate
4. Prevalence of undernourishment
5. Disability-adjust life years lost to noncommunicable diseases
6. Disability-adjust life years lost to communicable diseases

Intellectual

1. Adult literacy rate
2. Mean years of schooling
3. Harmonized test scores

Environmental

1. Mortality rate attributed to household and ambient air pollution, standardized by age
2. Mean annual exposure to air pollutant particles no larger than 2.5 micrometers, in micrograms per cubic meter
3. Total protected area
4. Average nitrogen dioxide level
5. Degree to which the ground in the most populous city is impervious to water

Social

1. Gender parity index, literacy rate of youth aged 15–24
2. Gini index as estimated by the World Bank
3. Female-to-male ratio of labor force participation rate (%)
4. World Bank estimate of control of corruption
5. World Bank estimate of the rule of law
6. Social class equality in terms of civil liberty
7. Social group equality in terms of civil liberty
8. Power distribution by social group

Source: Ahmad and Qureshi 2020.

The index can therefore be used to prioritize areas for wellness policy.

Source: Ahmad, H. and I. Qureshi. 2020. *Cross-Country Comparison of Wellness: An Empirical Assessment*. ADB.

Significant variation across subregions shows no single subregion consistently outperforming the others. East Asia ranks highest on physical wellness, Central Asia on intellectual wellness, and the Pacific on environmental and social wellness (Figure 2.3).

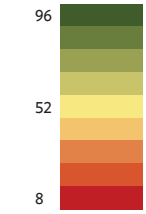
Figure 2.1 Wellness Index coverage and scores

Central Asia	
Armenia	73.02
Azerbaijan	62.76
Georgia	71.94
Kazakhstan	72.50
Kyrgyz Republic	64.49
Tajikistan	54.11
Turkmenistan	53.93
Uzbekistan	58.26
East Asia	
Mongolia	61.22
PRC	52.68
Republic of Korea	75.93
Pacific	
Fiji	72.00
Maldives	74.72
Papua New Guinea	49.98
Vanuatu	66.61
South Asia	
Afghanistan	23.56
Bangladesh	43.06
Bhutan	67.03
India	38.96
Nepal	44.93
Pakistan	27.24
Sri Lanka	69.29
Southeast Asia	
Cambodia	51.17
Indonesia	57.70
Lao PDR	51.32
Malaysia	69.12
Myanmar	48.17
Philippines	54.28
Singapore	78.96
Thailand	59.40
Viet Nam	65.83
Other Asia	
Australia	90.19
Japan	85.77
New Zealand	93.67
North America	
Canada	89.16
United States	82.31

LANIC	
Argentina	67.82
Barbados	78.05
Bolivia	61.29
Brazil	62.92
Chile	72.86
Colombia	62.65
Costa Rica	76.50
Cuba	76.66
Dominican Republic	57.76
Ecuador	64.69
El Salvador	57.49
Guatemala	49.46
Guyana	60.22
Haiti	35.52
Honduras	57.29
Jamaica	69.16
Mexico	61.10
Nicaragua	56.95
Panama	67.84
Paraguay	60.72
Peru	60.42
Suriname	65.92
Trinidad and Tobago	73.79
Uruguay	79.07
Venezuela	61.58
MENA	
Algeria	58.39
Bahrain	49.94
Egypt, Arab Rep.	39.73
Iran, Islamic Rep.	51.18
Iraq	37.58
Jordan	63.14
Kuwait	49.28
Lebanon	55.74
Malta	76.69
Morocco	55.99
Oman	65.06
Qatar	47.43
Saudi Arabia	47.53
Tunisia	62.88
United Arab Emirates	57.76

SSA	
Angola	30.94
Benin	42.41
Botswana	63.39
Burkina Faso	38.65
Burundi	42.91
Cameroon	34.36
Cape Verde	68.38
Central African Republic	14.17
Chad	8.38
Comoros	51.90
Cote d'Ivoire	35.36
Equatorial Guinea	39.61
Eritrea	37.90
Ethiopia excluding Eritrea	40.56
Gabon	54.45
Gambia	43.08
Ghana	49.28
Guinea	33.30
Guinea-Bissau	33.29
Kenya	54.31
Lesotho	49.60
Liberia	38.41
Madagascar	46.00
Malawi	52.42
Mali	29.79
Mauritania	32.14
Mauritius	78.06
Mozambique	41.41
Namibia	55.95
Niger	27.46
Nigeria	23.75
Rwanda	53.34
Sao Tome and Principe	61.59
Senegal	44.70
Sierra Leone	28.86
South Africa	57.80
Sudan	31.48
Swaziland	50.21
Tanzania	51.41
Togo	41.82
Uganda	44.66
Zambia	49.07
Zimbabwe	47.75

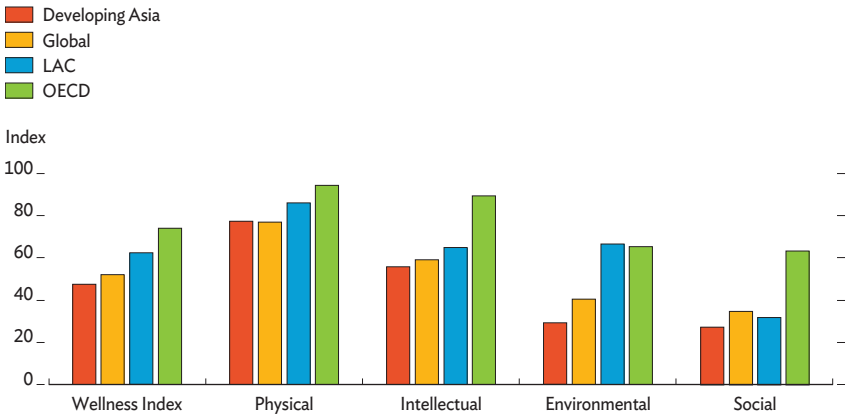
EUROPE	
Albania	72.21
Austria	89.27
Belarus	76.03
Belgium	88.07
Bosnia and Herzegovina	70.01
Bulgaria	77.03
Croatia	79.28
Cyprus	81.18
Czech Republic	86.96
Denmark	94.23
Estonia	91.09
Finland	96.24
France	85.79
Germany	93.75
Greece	74.56
Hungary	78.41
Iceland	90.56
Ireland	90.34
Italy	80.83
Latvia	85.47
Luxembourg	95.71
Macedonia, FYR	66.06
Moldova	71.08
Netherlands	87.96
Norway	94.41
Portugal	83.39
Russian Federation	71.40
Slovak Republic	82.68
Slovenia	92.23
Sweden	94.49
Switzerland	92.96
Turkey	55.63
Ukraine	68.66
United Kingdom	87.06



FYR = former Yugoslav republic, LANIC = Latin America and the Caribbean, Lao PDR = Lao People's Democratic Republic, MENA = Middle East and North Africa, PRC = People's Republic of China, SSA = Sub-Saharan Africa.

Source: Ahmad and Qureshi 2020.

Figure 2.2 Average wellness by pillar across regions

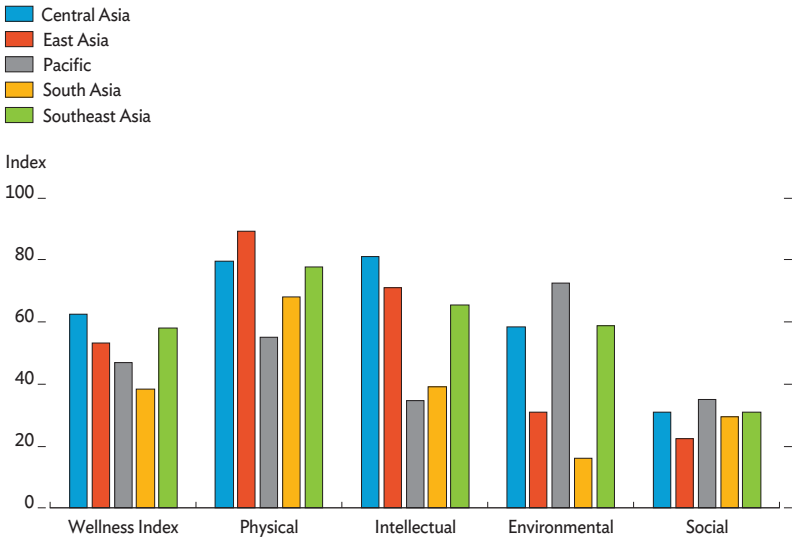


LAC = Latin America and the Caribbean, OECD = Organisation for Economic Co-operation and Development.

Note: Regional scores reflect national scores weighted by population.

Source: Ahmad and Qureshi 2020.

Figure 2.3 Wellness and pillar averages across subregions in developing Asia

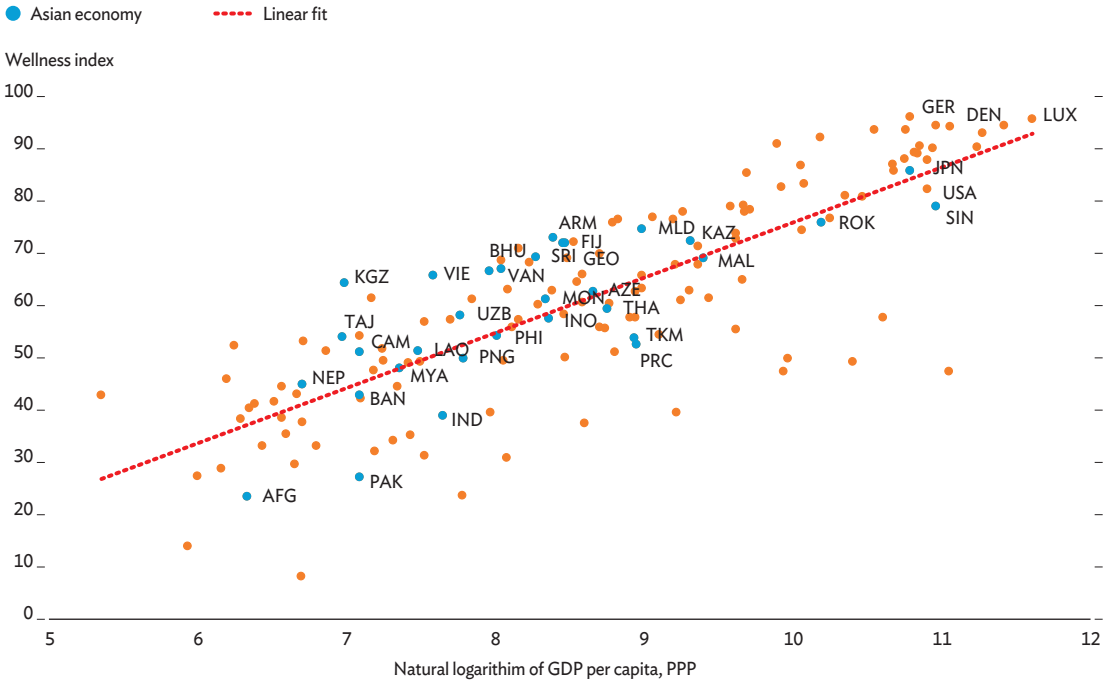


Note: Subregions scores reflect national scores weighted by population.
Source: Ahmad and Qureshi 2020.

The distribution of wellness scores versus GDP per capita by purchasing power parity suggests a close link between the two (Figure 2.4). A strong positive relationship exists, as countries with higher GDP tend to score better on wellness, both globally and within developing Asia. This result is intuitive and may justify or at least explain the historical use of GDP per capita as a measure of a nation's well-being. Countries with higher GDP per capita would intuitively have more resources to spend on their residents, better allowing them to meet wellness needs. However, wide dispersion in the data suggests that the relationship, while intuitive, is not straightforward. Observations appearing below the fitted line in Figure 2.4 indicate economies where wellness lags that of other economies with similar economic output per capita.

The Wellness Index presented here provides a global measure of relative wellness. In a way similar to how GDP per capita provides an easy-to-use measure of material well-being, the Wellness Index provides policy makers with an easy-to-use measure of national wellness in less material terms. Other indexes related to wellness exist but lack some of the features of the Wellness Index (Table 2.1). When used in conjunction with GDP, the Wellness Index provides a holistic view of wellness in a country. The indicators can be tracked over time, enabling policy makers in the future to assess how a shock such as the COVID-19 pandemic has affected wellness in the region and in individual economies.

Figure 2.4 Gross domestic product and wellness



AFG = Afghanistan, ARM = Armenia, AZE = Azerbaijan, BAN = Bangladesh, BHU = Bhutan, CAM = Cambodia, GER = Germany, DEN = Denmark, FIJ = Fiji, GDP = gross domestic product, GEO = Georgia, IND = India, INO = Indonesia, JPN = Japan, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, LAO = Lao People's Democratic Republic, LUX = Luxembourg, MAL = Malaysia, MLD = Maldives, MON = Mongolia, MYA = Myanmar, NEP = Nepal, PAK = Pakistan, PHI = Philippines, PNG = Papua New Guinea, PPP = purchasing power parity, PRC = People's Republic of China, ROK = Republic of Korea, SIN = Singapore, SRI = Sri Lanka, TAJ = Tajikistan, THA = Thailand, TKM = Turkmenistan, USA = United States of America, UZB = Uzbekistan, VAN = Vanuatu, VIE = Viet Nam.

Source: Ahmad and Qureshi 2020.

Table 2.1 Summary and pillar evaluation of other indexes that touch on wellness

Name	Methodology	Physical	Intellectual	Environmental	Social	Independent of growth
Human Development Index	Composite indicator created using GNP, life expectancy, and rates of literacy and school enrollment	🟡	🟡	🔴	🔴	🔴
OECD Better Life Index	11 sub-indicators capturing different dimensions of wellness	🟡	🟡	🟡	🔴	🔴
Indigo Wellness Index	Based primarily on physical health data and consumer spending	🟢	🔴	🔴	🔴	🔴
Social Progress Index	Composite of 51 measures of social progress, divided into three categories: basic human needs, foundations of well-being, and opportunity	🟢	🟡	🟡	🟢	🟢
Happy Planet Index	Combines four components to measure the efficient use of environmental resources	🟡	🔴	🟡	🟡	🟢
Inclusive Green Growth Index	Composite indicator created to measure inclusion, growth, and environmental sustainability	🟡	🟡	🟡	🟡	🔴

🟢 = yes, 🔴 = no, 🟡 = partly, GDP = gross domestic product, OECD = Organisation for Economic Co-operation and Development.

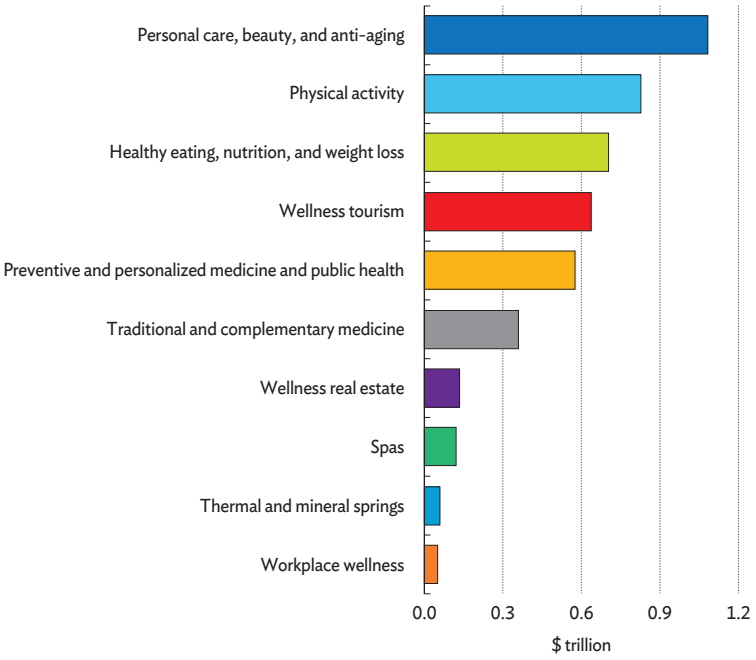
Source: Ahmad and Qureshi 2020.

2.2 The global wellness economy

The wellness economy can be defined as industries that enable consumers to incorporate wellness activities and lifestyles into their daily lives. Aggregating the economic size of these industries, the Global Wellness Institute estimated the global wellness economy at $4.5 trillion in 2018, or 5.5% of global economic output (Yeung and Johnston 2020). Global health expenditures, by comparison, were $7.4 trillion in 2016. The wellness economy grew from $3.4 trillion in 2013 to $4.2 trillion in 2017, or by about 5% or more annually in nominal terms. The wellness economy is thus a substantial and fast-growing segment of the global economy.

Figure 2.5 displays 10 sectors closely associated with the global wellness economy. In Asia and the Pacific—defined as developing Asia plus Australia, Japan, and New Zealand—economic output related to physical activity was valued in 2018 at $240.4 billion, wellness tourism at $136.7 billion, wellness real estate at $46.8 billion, thermal and mineral springs at $31.6 billion, spas at $26.5 billion, and workplace wellness at $9.3 billion. Wellness industries in the region are not only large, but they are growing rapidly, with wellness tourism, for example, expanding by an annual average of 10.9% from 2015 to 2017. Data for the remaining four wellness industries are unavailable disaggregated by country and region, precluding any estimation of national and regional wellness economies (Yeung and Johnston 2020a).

Figure 2.5 The global wellness economy, 2018



Source: Yeung and Johnston 2020a.

Box 2.2 Wellness industries as defined by the Global Wellness Institute

All 10 sectors in the wellness economy contribute to the pursuit of activities that promote physical and mental well-being. They are defined as follows:

(i) **Personal care, beauty, and anti-aging.** Consumer expenditure on beauty and salon services excluding spas; skin-, hair-, and nail-care services and products; cosmetics, toiletries, and other personal care products; dermatology; prescription pharmaceuticals for skin care; and products and services that specifically address age-related health and appearance issues, such as cosmetics and cosmeceuticals for skin, face, or body care, hair care and growth, and pharmaceuticals and supplements that treat age-related health conditions.

(ii) **Physical activity.** Consumer spending associated with deliberate physical activities performed during leisure and recreation, including three recreational activity segments (sports and active recreation, fitness, and mindful movement) and three enabling segments (technology, equipment and supplies, clothing and apparel).

(iii) **Healthy eating, nutrition, and weight loss.** Consumer expenditure on vitamins and supplements, fortified or functional foods and nutraceuticals, natural and organic foods, health foods, sports nutrition, nutrition and dietary services, and products and services for weight loss and management.

(iv) **Wellness tourism.** All spending by wellness tourists—primary and secondary, international and domestic—including on lodging, food and beverages, activities and excursions, shopping, and in-country transportation.

(v) **Preventive and personalized medicine and public health.** Spending on medical services that focus on treating people who are well, preventing disease, or detecting risk factors: notably routine physical exams, diagnostic and screening tests, and genetic testing. Includes personalized health uses of sophisticated information and data for individual patients, such as health analysis, diagnostics, and genetic, molecular, and environmental screening; personalized disease management services; and health information technology such as electronic health records, telemedicine, and remote patient monitoring to provide tailored approaches for preventing disease, diagnosing and managing risk factors, or managing and treating conditions.

(vi) **Traditional and complementary medicine.** Expenditure on diverse medical, health care, holistic, and mentally or spiritually based systems, services, and products that are not generally considered to be part of conventional medicine or the dominant health care system, such as homeopathy, naturopathy, chiropractics, traditional Chinese medicine, ayurveda, energy healing, and herbal and other traditional remedies and supplements. The nomenclature for this sector is evolving alongside growing consumer adoption of traditional, indigenous, complementary, alternative, and integrative medical practices outside of the conventional Western medical system.

(vii) **Wellness real estate.** Expenditure on the construction of residential, commercial, and institutional properties for offices, hospitality, mixed- and multi-family use, medicine, and leisure that deliberately incorporate wellness elements in their design, materials, and execution, as well as in their amenities, services, and programming.

(viii) **Spa economy.** Includes revenue earned by spas and the related cluster of businesses that support and enable spas through targeted education, consulting, capital investment, and associations, as well as spa-related media and events.

(ix) **Thermal and mineral springs.** Encompasses the revenue of businesses associated with the wellness, recreational, and therapeutic uses of water with special properties, including thermal water, mineral water, and seawater.

(x) **Workplace wellness.** Includes expenditure by employers on programs, services, activities, and equipment aiming to improve their employees' health and wellness by raising awareness, providing education, and offering incentives that address specific health risk factors and behavior—lack of exercise, poor eating habits, stress, obesity, and smoking—and encourage employees to adopt healthier lifestyles.

Source: Yeung, O. and K. Johnston. 2020a. *Global Wellness Industry and Its Implications for Asia's Development*. ADB.

2.3 Size of the wellness economy based on national accounts

The wellness economy can be measured using a country's system of national accounts. Applying the method laid out in Box 2.3 to nine Asian Development Bank developing member countries—Fiji, Kazakhstan, Malaysia, Mongolia, the Philippines, the People's Republic of China (PRC), Sri Lanka, Thailand, and Viet Nam—reveals the region's wellness economy to be large and growing. As noted above, data limitations prevent the Global Wellness Institute from estimating the size of the wellness economy at the national or regional level (Yeung and Johnston 2020a).

Box 2.3 Estimating the wellness economy using national accounts

While wellness can refer to activities for which no money changes hands, the reality is that many wellness activities are economic transactions. As such, they can be tracked through the system of national accounts to estimate a country's wellness economy. This method is useful in that it shows the direction in which a country is headed in terms of its production of wellness goods and services and how important they have become to the economy overall.

The first step in estimating a country's wellness economy is to identify which industrial codes in the United Nations' International Standard Industrial Classification of All Economic Activities (ISIC) pertain to wellness goods and services. As much as possible, the selected codes must include the different definitions and aspects of wellness discussed in past literature (e.g., Dunn 1959, WHO 2006, Roscoe 2009, Global Wellness Institute 2018). These codes broadly capture a variety of wellness goods and services in various industries: activities tied to human health, residential care, social work, tourism, amusement, recreation, sports, creativity, arts, entertainment, culture, and personal care; the construction of wellness-related structures such as health and sports facilities; and the manufacture and retail trade of wellness goods such as pharmaceutical, beauty, and sports products.

The second step is to extract the gross value added (GVA) from national accounts corresponding to the chosen ISIC codes using national supply–use or input–output tables. These tables, generally aggregated by sector and product, should be disaggregated where necessary to capture only the GVA attributable to wellness industries. Depending on the availability and quality of data for each country, national accounts can be disaggregated in several ways, using data from a country's national statistics office, individual firms, or economically similar countries.

The steps above give only the GVA generated directly by industries producing wellness goods and services. However, measuring the whole wellness economy must include GVA attributable to related industries: electricity and other inputs used in the production of wellness goods and services, for example, and the value added in the production of capital products needed to enable and support the production of wellness goods and services. These factors can be included by employing the methodology provided by de los Santos and Lumba (2020), which decomposes the final-use vector from an input–output table into value-added contributions made by different sectors of the economy (delos Santos and Lumba 2020).

References:

de los Santos, C. and A. J. Lumba. 2020. The Core of the Digital Economy: A Proposed Framework. Unpublished.

Dunn, H. 1959. High-level wellness for man and society. *American Journal of Public Health* 49(6).

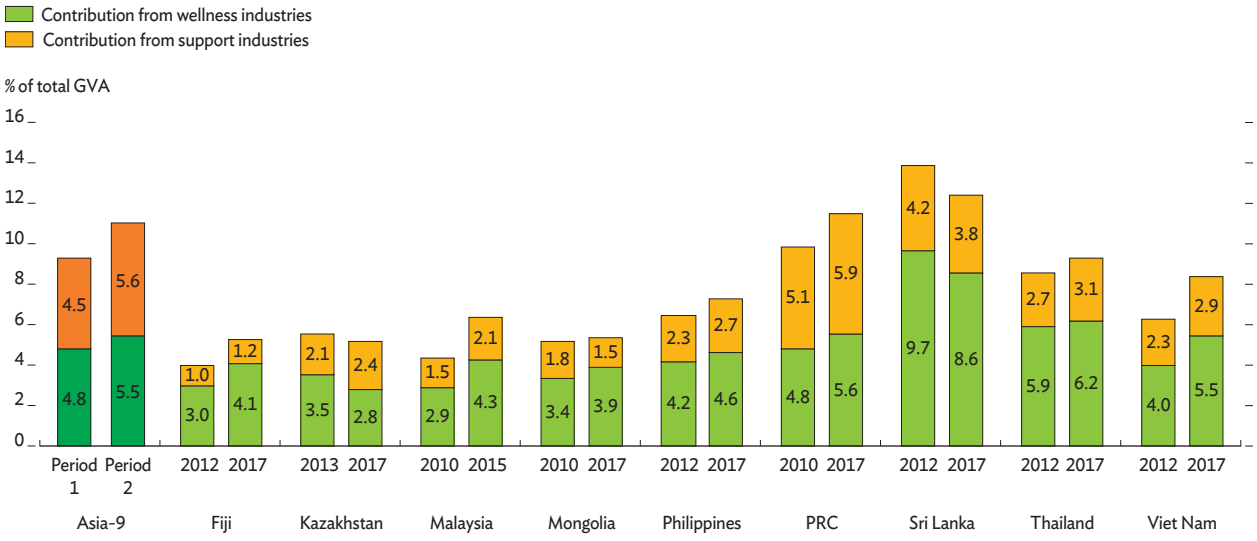
Global Wellness Institute. 2018. *Global Wellness Economy Monitor 2018*. https://globalwellnessinstitute.org/industry-research/2018-global-wellness-economy-monitor/.

Roscoe, L. J. 2009. Wellness: A Review of Theory and Measurement for Counselors. *Journal of Counselling and Development* 87(2).

World Health Organization. 2006. *Health Promotion Glossary Update*. Geneva.

Source: Consing, R. M. III, M. J. Barsabal, J. T. Alvarez, and M. J. Mariasingham. 2020. *Using the System of National Accounts to Estimate a Country's Wellness Economy.* ADB.

Figure 2.6 Wellness economies, % of total GVA



Asia-9 = aggregate of the nine countries in the figure, GVA = gross value added, PRC = People's Republic of China.

Notes: The two comparison years vary to accommodate data limitations, but taking the Asia-9 figures together as a proxy for developing Asia gives an idea of how big the region's wellness economy has become. This is done by summing the GVA attributable to wellness in all countries and dividing it by the sum of their total GVA in each year.

Source: Consing et al. 2020.

Figure 2.6 shows the size of the wellness economy in each country at two different times, separated by about 5 years within the past decade, as a percentage of each country's gross value added (GVA). Green bars show the contribution of wellness industries, and orange bars the contribution of industries supporting the wellness economy—for instance GVA from electricity consumed as an intermediate input by a firm in the wellness industry, such as a gym. Summing these two bars gives the estimated size of the wellness economy in each country during that year.

The wellness economy share of total GVA is generally increasing. That the share fell in Kazakhstan and Sri Lanka does not indicate that the wellness economy shrank in absolute terms in either country, only that it grew more slowly than the rest of the economy. The PRC shows relatively large orange support bars in both years, indicating that its wellness industries are relatively developed and sophisticated, with multiple industries contributing to their production and dependent on them for business.

The rising importance of the wellness economy in the larger national economy reflects how much wellness economies have grown in real terms. Table 2.2 shows the average annual growth rate for each country's wellness economy GVA after adjusting for inflation, using 2010 as the base year.

Table 2.2 Real average annual growth rate of wellness economies

Country	Average annual growth rate (%)
Fiji	10.2
Kazakhstan	1.2
Malaysia	13.2
Mongolia	9.3
Philippines	8.6
People's Republic of China	10.5
Sri Lanka	1.3
Thailand	5.2
Viet Nam	11.8

Source: Consing et al. 2020.

As shown, the wellness economy grew in each country between the sample years, even after adjusting for inflation. Several—Fiji, Malaysia, the PRC, and Viet Nam—experienced average annual growth rates exceeding 10%. If sustained for 7 years, such growth at least doubles each country's wellness economy in that period. Other countries with rapidly growing wellness economies are Mongolia, with associated GVA rising by 9.3%, and the Philippines, by 8.6%. Growth in the wellness economy generally outpaces overall economic growth in the countries sampled.

Treating these nine economies as a proxy for developing Asia informs two other key insights. One relates to the sector's contribution to the overall economy, with the wellness economy likely accounting for over 11% of total GVA in the region and growing by an average of about 9.9% annually in recent years, weighed by each country's total GVA. The other pertains to the contribution of wellness to employment. Using an established procedure for input–output analysis (Miller and Blair 2009) yields the finding that, in recent years, about 13.7% of employment in developing Asia can be traced to the wellness economy.

3 Holistic pathway to physical wellness

COVID-19 underscores the importance of physical wellness. Proper diet, regular physical activity, and other lifestyle changes prevent medical conditions such as cardiovascular disease, diabetes, and obesity, which have been shown to worsen vulnerability to infection. As workplaces in the region become increasingly unwell and impose a heavy toll on the health of Asian workers, they need effective ways to promote physical health. Physical activity such as regular physical exercise is perhaps the most important contributor to physical health, highlighting the importance of community planning and infrastructure such as public parks. As poor nutrition increasingly poses a risk to the physical health of Asians, policies must be adopted to guide the public toward better diets, safeguard public health, and minimize the eventual burden on the public health care system.

3.1 Physical inactivity—a worsening threat to public health in developing Asia

Physical activity, defined in Box 3.1, is intrinsic to wellness. As advocated by physicians and public health authorities around the world, regular and adequate physical activity is vital to our health in all aspects: muscular and cardiorespiratory fitness; bone and functional health; energy, balance, and weight control; and lower risk of depression and a number of chronic diseases such as hypertension, coronary heart disease, stroke, diabetes, and various types of cancer. Yet, recent decades have seen an alarming trend of declining physical activity in countries around the world. Recent data indicate that as many as 31% of adults may be physically inactive (Guthold et al. 2018, Hallal et al. 2012). Research across countries—including in Asia—associates low or declining physical activity with high or rising national incomes, and it shows women and girls generally less active than men and boys.

These trends are occurring at a time when we need physical activity more than ever to mitigate the rise of chronic disease and the impacts of aging populations. *The Lancet* has described worsening physical inactivity as a "pandemic, with far-reaching health, economic, environmental, and social consequences" (Kohl et al. 2012). Obesity, which is linked to physical inactivity, has nearly tripled worldwide since 1975, with 39% of adults now overweight (WHO 2018).

Box 3.1 Definition of physical activity

The World Health Organization defines physical activity as "any bodily movement produced by skeletal muscles that requires energy expenditure—including activities undertaken while working, playing, carrying out household chores, traveling, and engaging in recreational pursuit" (Yeung and Johnston 2020c). It adds that maintaining good health requires children and adolescents to engage daily in 60 minutes of moderately to vigorously intense physical activity, and adults weekly in 150 minutes of moderately intense physical activity or 75 minutes of vigorous physical activity. The benefits of physical activity are varied, widely proven, and well-known: preventing chronic disease, reducing stress, managing weight, strengthening functional mobility, improving sleep, alleviating depression, and improving cognitive function. To receive these benefits, engagement in physical activity needs to be regular, consistent, and sustained—not intermittent, only during holidays, or only when we want to lose weight or can find the time.

Physical activities can be broadly divided into natural movement and recreational physical activity. Natural movement encompasses the physical activities that are essential to our daily lives, by category transportation (walking and cycling), occupation (work that requires manual labor), and domestic (household chores and gardening). From time immemorial, such activities have been the core of human physical activity. Unfortunately, as discussed below, natural movement is now on the decline around the world, increasingly at odds with modern lifestyles and built environments.

Many people engage in optional and intentional movement as a hobby or to fill leisure time. Recreational physical activity includes going to a gym, playing sports, taking a walk, cycling for fun, dancing, and, in the case of children, playing on a playground. As natural movement declines, recreational physical activity becomes essential for a growing number of people to stay fit and healthy.

Source: Yeung, O. and K. Johnston. 2020c. *The Physical Activity Economy in Asia: Market Size, Participation, Barriers, and Options to Increase Movement*. ADB.

Physical inactivity and obesity are key lifestyle risk factors that directly contribute to the rise of chronic or noncommunicable diseases—heart disease, stroke, cancer, diabetes, and chronic lung disease—which collectively cause 71% of deaths worldwide every year (WHO 2018). The global economic burden of physical inactivity was estimated at $67.5 billion in 2013, comprising $53.8 billion in direct health care costs and $13.7 billion in productivity losses (Ding et al. 2016).

Current state of physical inactivity in Asia

The most recent country data on physical activity, compiled by *The Lancet*, show 27.5% of the global adult population performing insufficient physical activity, if defined as not meeting the World Health Organization standards described above.[1] As shown in Table 3.1, the degree of physical inactivity varies widely across Asia.

In general, inactivity is lower than the global average in developing Asia. By subregion, it is lower than the global average in all subregions except South Asia. Disparity in inactivity rates between men and women is generally less stark in East and Southeast Asia than in other subregions across developing Asia. Asian countries with the largest inactive populations are, in descending order, the Philippines, Malaysia, Singapore, Japan, the Republic of Korea (ROK), India, and

Pakistan, as well as a number of Pacific nations such as the Marshall Islands, Nauru, Palau, Kiribati, and the Federated States of Micronesia. Asian countries with the lowest rates of inactivity are, in descending order, Cambodia, Myanmar, Nepal, the Kyrgyz Republic, and the PRC, and in the Pacific, Niue, Vanuatu, Samoa, and Papua New Guinea. Countries with the least disparity in inactivity between men and women are, in descending order, Armenia, Cambodia, Georgia, Mongolia, Vanuatu, Indonesia, Niue, Kazakhstan, Nepal, Japan, the PRC, and Singapore. In many economies across the region, women are far more inactive than men: in desending order, Palau, Bangladesh, Tuvalu, India, the Philippines, Pakistan, Tajikistan, the Cook Islands, Tonga, Sri Lanka, and Timor-Leste.

Table 3.1 Physical inactivity in developing Asia and Japan, 2016

Subregion/economy	Population with insufficient physical activity (%)	Men (%)	Women (%)
Central Asia	**22.1**	**17.7**	**26.1**
Armenia	22.6	23.3	22.1
Georgia	18.0	17.3	18.6
Kazakhstan	27.5	26.1	28.7
Kyrgyz Republic	13.9	10.9	16.7
Tajikistan	29.3	19.9	38.7
Uzbekistan	19.1	13.3	24.4
East Asia	**14.8**	**16.5**	**13.2**
Mongolia	18.6	17.8	19.4
People's Republic of China	14.1	16.0	12.2
Republic of Korea	35.4	29.5	41.0
Southeast Asia	**25.5**	**22.8**	**28.1**
Brunei Darussalam	27.3	21.2	33.9
Cambodia	10.5	9.8	11.1
Indonesia	22.6	23.5	21.7
Lao People's Democratic Republic	16.3	11.7	20.6
Malaysia	38.8	34.6	42.8
Myanmar	10.7	8.1	13.1
Philippines	39.7	30.1	49.1
Singapore	36.5	34.3	38.6
Thailand	24.6	21.8	27.2
Timor-Leste	17.8	10.3	25.5
Viet Nam	25.4	19.9	30.6

continued next page

Table 3.1 *Continued*

Subregion/economy	Population with insufficient physical activity (%)	Men (%)	Women (%)
South Asia	**33.0**	**23.7**	**42.8**
Bangladesh	27.8	16.1	39.5
Bhutan	23.0	17.7	29.5
India	34.0	24.7	43.9
Maldives	30.3	25.8	34.8
Nepal	13.4	12.0	14.6
Pakistan	33.7	24.4	43.3
Sri Lanka	28.9	20.2	36.7
The Pacific	**15.7**	**11.9**	**19.6**
Cook Islands	18.5	9.8	27.2
Federated States of Micronesia	36.6	32.9	40.5
Fiji	17.4	10.8	24.1
Kiribati	40.4	34.5	45.8
Marshall Islands	43.5	37.0	50.0
Nauru	42.1	34.9	49.4
Niue	6.9	7.8	6.0
Palau	40.9	28.3	53.5
Papua New Guinea	14.8	11.4	18.2
Samoa	12.6	8.2	17.2
Solomon Islands	18.2	13.3	23.2
Tonga	17.4	8.5	25.9
Tuvalu	27.3	17.5	37.2
Vanuatu	8.0	7.2	8.8
Developing Asia	**24.8**	**20.7**	**28.9**
Japan	*35.5*	*33.8*	*37.0*
Global average	**27.5**	**23.4**	**31.7**

Note: Regional averages are weighted by population.

Sources: Yeung and Johnston 2020c; Guthold et al. 2018; ADB estimates using data from UN Department of Economics and Social Affairs, World Population Prospects Rev. 2019. https://population.un.org/wpp/; Pacific Data Hub. https://pacificdata.org/.

There is no question that modern lifestyles and livelihoods require much less physical exertion than those of previous generations of farmers, fishers, herders, traders, and industrial workers. In all aspects, daily lives have become more sedentary. Across Asia, urbanization, technological developments, and growing numbers of office jobs have drawn more people into sedentary pursuits. For the growing middle class, and for people in general who live in middle- and high-income countries, household chores such as cooking and cleaning have been greatly eased by modern appliances and industrialized food production. Meanwhile, the digital revolution has enabled us to shop, socialize, and consume news and entertainment without leaving our homes or even our sofas.

The trend is equally alarming for youth. Studies have found a long-term decline in cardiovascular fitness among children and adolescents, especially in upper- and middle-income countries (Tomkinson, Lang, and Tremblay 2019, Tomkinson et al. 2012, Macfarlane and Tomkinson 2007). In many countries, fewer children walk or bike to school (Uddin et al. 2019, Lu et al. 2014). With urbanization, the spontaneous and unsupervised outdoor play of past generations of Asian children has given way to fewer opportunities for outdoor physical activity. As with adults, teens now have less motivation to be active, glued as they are to their mobile devices for social media, games, and other entertainment.

What is the physical activity economy?

Physical activity generates significant economic activity, both in Asia and around the world. As leisure-time fitness, exercise, and active recreation become more popular, these pursuits will increasingly become important items in private household spending. Government spending also plays a substantial role in supporting physical activity. Both private and public expenditure play major roles in the physical activity economy (Box 3.2).

The physical activity market is defined as consumer spending associated with intentional physical activities performed during leisure and recreation, with the core being the services that allow consumers to participate in three categories of recreational physical activities: sports and active recreation, fitness, and mindful movement. The market includes three support segments that enable and facilitate consumer participation in these activities: technology, equipment and supplies, and apparel and footwear.

To estimate the size of the global physical activity market, this chapter focuses on private spending on recreational physical activity (GWI 2019). This is mainly for lack of clear data on public spending, spanning as it does all levels of government and multiple agencies, but it is worth noting that private spending is the best gauge for rising consumer interest in intentional recreational physical activities and related services.

Asia's physical activity economy

Asia has one of the largest and most diverse physical activity markets in the world, estimated at $240.4 billion in 2018.[2] The physical activity market in the region is large, diverse, and dynamic. It accounts for 29% of the $828.2 billion global economy for physical activity and is the second-largest regional market in the world for physical activity, after North America (Figure 3.1). Within the Asian physical activity market, $115.4 billion, or 48%, is direct consumer expenditure on a variety of recreational physical activities, primarily sports and active recreation, fitness, and mindful movement.

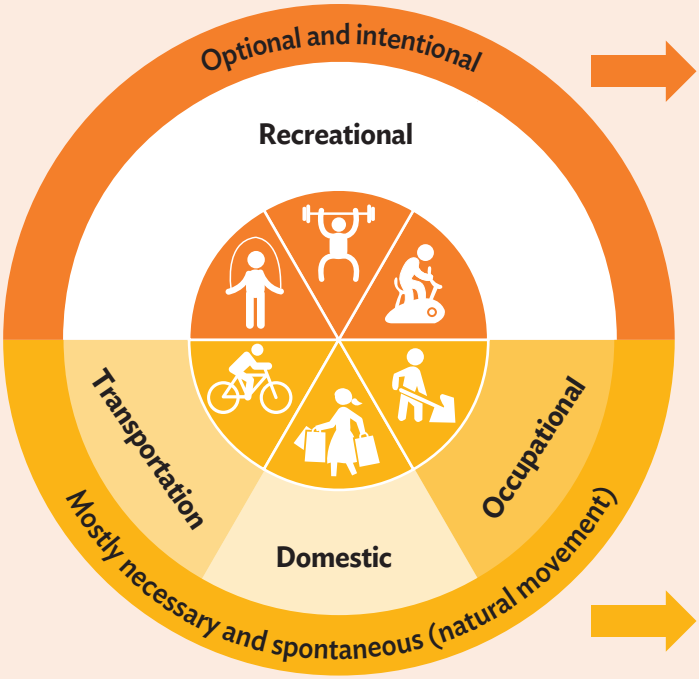
Box 3.2 Public and private expenditure on physical activity

- **Private expenditure** goes primarily to intentional recreational physical activities, which individuals and families increasingly choose to pursue in their leisure time. These expenditures include fees to join a gym, take a fitness or yoga class, join a recreational sports team or club, swim laps at a pool, run a marathon, and so on. Individuals also spend money on special clothes and shoes, fitness equipment, sporting goods, and technology devices and services that support their participation in recreational physical activities—and may also support walking or biking as transportation, which are natural movement physical activities.

- **Public expenditure**, often by local governments, supports both natural movement and recreational physical activities primarily through infrastructure investment and spending on youth and education. In most countries, governments support recreational physical activities and sports in a variety of ways: building and maintaining public sports fields, swimming pools, tennis courts, and running paths and trails, as well as funding youth and community sports leagues and training programs. A smaller number of governments build and/or subsidize community fitness centers and gyms. Governments fund physical education classes in schools, which expose children early to a variety of sports and physical activities and help instill lifelong healthy habits. Public expenditure is also critical to facilitating natural movement physical activity, especially through urban planning and public transport investments that create infrastructure appropriate for people who walk and ride bicycles as they commute to work or go about their daily activities.

Source: Yeung, O. and K. Johnston. 2020c. *The Physical Activity Economy in Asia: Market Size, Participation, Barriers, and Options to Increase Movement*. ADB.

Expenditure on physical activity



Spending on recreational physical activity

Primarily private expenditure on:	Supported by public expenditure on:
• fitness and exercise activities • mindful movement activities • active recreation and sports activities • apparel, equipment, and technology	• parks and recreational facilities and programs • sports facilities and programs • physical education • medical prescription for exercise

Spending on natural movement physical activity

Primarily public expenditure on:	Supported by private expenditure on:
• urban planning • transportation infrastructure (walking paths, cycling lanes, public transit)	• architecture and design • apparel and equipment (shoes and bicycles for transit)

Source: Yeung and Johnston 2020c.

Figure 3.1 Physical activity economy by region, 2018

Note: Physical activity spending per participant is total expenditure on physical activity divided by the number of people who participate in recreational physical activities regularly, at least monthly. Regional groupings follow those of the Global Wellness Institute.

Source: Yeung and Johnston 2020c.

The remaining $125.0 billion, or 52%, is expenditure on a variety of enabling and supporting supplies: primarily clothing and footwear but also fitness equipment, sporting goods, and fitness- and exercise-supporting technologies.

Annual physical activity spending averages $176 per participant in Asia and the Pacific: $85 spent on participating in recreational physical activities and $92 spent on associated apparel, footwear, equipment, sporting goods, and technology devices and services (Table 3.2). Expenditure per participant in Asia is considerably lower than the global average of $306. In Asia's most developed economies and largest metropolitan areas, middle- and upper-income consumers have access to a well-developed industry of fitness and sporting facilities: gyms and health clubs, sporting clubs, swimming pools, and yoga and dance studios. In these places, participants' spending is higher because average incomes are higher and also because there is a wider variety of fitness and recreational physical activities that people can pay for.

Table 3.2 Physical activity economy in Asia and the Pacific, 2018

Item	Participation rate (%)	Market size ($ billion)	Average spending per participant
Recreational physical activities	**33.2**	**116.6**	**85**
Sports and active recreation	30.4	83.0	66
Fitness	1.1	22.7	494
Mindful movement	4.5	10.9	58
Enabling segments		**125.5**	**92**
Apparel and footwear		87.5	8
Equipment and supplies		27.6	20
Technology		10.8	64
Total physical activity economy in Asia and the Pacific		**240.4**	**176**

Notes: The participation rate is the share of the total population that engages in one or more of the three physical activity categories regularly, at least once a month. Market size is consumer expenditure on classes, memberships, entry fees, trainers, and related services and methods of participation. Physical activity spending per participant is total expenditure on physical activity divided by the number of people who participate regularly, at least once a month. Numbers may not sum precisely because of rounding or segment overlap. Asia and the Pacific in the table follows the Global Wellness Institute definition.

Source: Yeung and Johnston 2020c.

However, for most people in Asia, the private market and infrastructure for fitness and sports are not well developed. In these places, people who engage in recreational physical activity spend little or nothing to do so using public facilities: playing soccer in a local league or with friends, going for a run outside, or doing tai chi in a city park. For this reason, average spending per participant can vary widely across Asia, ranging from $622 in the ROK, $495 in Japan, and $460 in Singapore to $66 in India, $55 in the Philippines, and $29 in Indonesia and Viet Nam (Table 3.3).

Not surprisingly, the largest physical activity markets in the region are in the PRC and Japan, which rank second and third globally after the US. The top three markets in Asia—the PRC, Japan, and the ROK—account for nearly three-quarters of all physical activity spending in the region. It is noteworthy that, in several Asian markets—Bangladesh, Cambodia, India, Myanmar, Pakistan, Sri Lanka, and Thailand—spending on enabling supplies is larger than spending on recreational physical activity participation. In other markets—Australia, New Zealand, the ROK and Singapore—the opposite is the case. These differences largely reflect how much people spend on apparel and shoes in these economies.

Buoyed by economic growth, the rising purchasing power of the middle class, and a growing interest in healthy and active lifestyles, Asia's physical activity economy is growing quickly and becoming increasingly competitive. Asia will have the world's fastest-growing regional economy for physical activity spending over the next 5 years—with an average annual growth rate of 9.2%, compared with 6.6% globally—and will overtake North America as the largest region by expenditure in 2023.

Table 3.3 Top 20 physical activity markets in Asia and the Pacific, 2018

	Recreational physical activity		Enabling supplies ($ billion)	Total physical activity market ($ billion)	Rank in 2018	Spending per participant ($)
	Participation rate (%)	Market size ($ billion)				
People's Republic of China	48.6	53.56	56.89	109.35	1	158.88
Japan	69.6	20.79	23.16	43.89	2	495.49
Republic of Korea	73.7	14.25	9.32	23.46	3	622.04
Australia	84.1	11.45	5.37	16.73	4	803.06
India	15.0	3.51	10.02	13.39	5	66.00
Taipei,China	84.0	3.69	4.08	7.73	6	388.48
Hong Kong, China	58.2	1.40	2.72	4.11	7	951.39
New Zealand	83.8	1.72	1.32	3.03	8	760.37
Thailand	27.8	0.74	2.16	2.89	9	150.26
Indonesia	34.2	1.30	1.34	2.61	10	28.60
Malaysia	41.1	0.75	1.29	2.04	11	154.99
Pakistan	13.2	0.28	1.68	1.95	12	73.23
Philippines	32.7	0.68	1.23	1.90	13	54.54
Bangladesh	25.2	0.22	1.58	1.79	14	42.70
Singapore	64.9	1.08	0.67	1.73	15	460.07
Viet Nam	35.7	0.47	0.54	1.00	16	28.90
Sri Lanka	19.2	0.16	0.44	0.60	17	149.31
Macau, China	51.1	0.16	0.32	0.47	18	1,456.61
Myanmar	21.3	0.07	0.40	0.47	19	40.59
Cambodia	21.4	0.06	0.15	0.21	20	59.11

Notes: The participation rate is the share of the total population that engages in one or more of the three physical activity categories regularly, at least once a month. Market size is consumer expenditure on classes, memberships, entry fees, trainers, and related services and methods of participation.
Physical activity spending per participant is total expenditure on physical activity divided by the number of people who participate regularly, at least once a month. Numbers may not sum precisely because of rounding or segment overlap.

Sources: Yeung and Johnston 2020c; UN World Population Prospects 2019. https://population.un.org/wpp/ (accessed 3 July 2020); authors' calculations.

Over 40% of the global increase in the physical activity market will be in Asia and the Pacific, and India and the PRC together are projected to account for nearly one-third of market growth. In Asia's higher-income countries and major cities, consumers keenly follow the latest fitness and recreational trends and offerings, while the region's vibrant private sector innovates, imports, improvises, and adapts to meet rising demand. Across the region, rising concern about obesity and chronic disease, and awareness of their link to inactivity, will continue to push governments, nonprofits, medical systems, employers, and consumers to pay more attention to physical activity.

Low correlation between spending and participation

Higher spending on physical activity does not necessarily correspond, however, to higher participation. The percentage of the population that participates in recreational physical activity in Asia and the Pacific is estimated at 33.2%, just below the global average of 35.5%.[3] The region thus has a lower participation rate than Latin America and the Caribbean despite its spending per participant being quite a bit higher (Figure 3.2). The participation rate in Asia and the Pacific is only slightly higher than in Sub-Saharan Africa, despite spending per participant being more than seven times higher.

Figure 3.2 Recreational physical activity participation rate by region, 2018

Note: Regional groupings follow those of the Global Wellness Institute.
Source: Yeung and Johnston 2020c.

Across Asia and the Pacific, participation in recreational physical activity varies widely, from a high of 84% in Australia and Taipei,China to a low of 13%–15% in India and Pakistan (Table 3.4). Importantly, many people in Asia conduct their leisure-time physical activity in public places that require little or no spending. In lower-income countries, people participate in sports and other recreational activities in a variety of public and free venues: public parks and plazas, free sporting facilities such as neighborhood basketball courts or ball fields, vacant lots, streets, and at home.

Table 3.4 Recreational physical activity participation rates in Asia and the Pacific, 2018

Economy	Participation rate (%)	Rank	Economy	Participation rate (%)	Rank
Australia	84.1	1	Viet Nam	35.7	14
Taipei,China	84.0	2	Indonesia	34.2	15
New Zealand	83.8	3	Philippines	32.7	16
Mongolia	75.0	4	Thailand	27.8	17
Republic of Korea	73.7	5	Timor-Leste	26.3	18
Japan	69.6	6	Bangladesh	25.2	19
Singapore	64.9	7	Cambodia	21.4	20
Hong Kong, China	58.2	8	Myanmar	21.3	21
Macau, China	51.1	9	Nepal	20.0	22
People's Republic of China	48.6	10	Sri Lanka	19.2	23
Papua New Guinea	46.4	11	India	15.0	24
Malaysia	41.1	12	Pakistan	13.2	25
Lao People's Democratic Republic	39.8	13			

Note: The participation rate is the share of the total population that participates in one or more of the three physical activity categories regularly, at least monthly.
Source: Yeung and Johnston 2020c.

Because private fitness and recreation businesses, facilities, and infrastructure are less developed, out-of-pocket spending tends to be low, even zero.

Free individual and group exercise in public outdoor gyms, plaza dancing, and tai chi in parks are very popular in the PRC, especially among seniors. "Plaza dancing" (*guangchang wu*) has become a major exercise phenomenon, practiced by an estimated 100 million women (and some men), most of them middle-aged or older, in public squares, parks, parking lots, and other public venues. The physical inactivity rates discussed above do not necessarily correlate with recreational physical activity rates. For example, in poorer countries, individuals may engage in a lot of physical activity, such as farm work or other physical labor, but have little time or resources for recreational physical activity.

Even in higher-income markets, many people pay nothing to participate in sports and other recreational physical activities. National survey data show that 67% of adult participants in Japan, 25% in the ROK, and 41% in Australia spend no money to participate in these activities, yet participation rates in all three countries are quite high (Japan Sports Agency 2017, ROK Ministry of Culture, Sports, and Tourism 2017, Australian Sports Commission Clearinghouse for Sport and Physical Activity 2019).

Complementing well-developed private sector fitness markets, the governments in all three of them have invested in widespread, publicly subsidized fitness and sports facilities and infrastructure, which allow their populations to participate with very low out-of-pocket expenditure.

3.2 Increasingly unwell Asian workplace

Because Asians spend a large part of their life working, their physical and mental well-being at the workplace is vital to wellness overall. Workplace safety or its absence greatly affects the physical well-being of many workers. Every day, over 1.9 billion people in Asia go to work (ILO 2018). In a lifetime, the average person spends at least 90,000 hours working (Pryce-Jones 2010). Yet the health and wellness of Asian workers is far from optimal. The issues vary across countries and industries, from the office worker who is perpetually exhausted by working 14-hour days to the small business employee who receives no benefits or sick leave, the manufacturing worker who is allowed no break and is forced to work overtime, and the miner who toils in life-threatening conditions.

In 2017, an estimated 2.8 million people worldwide died from occupational injuries or work-related diseases, with Asia accounting for over two-thirds of the total (ILO 2019). The most vulnerable workers are typically the poorest and the least informed, trained, and protected: women, children, disabled workers, migrant workers, and ethnic minorities. Not only do these injuries, diseases, and resulting fatalities bring immense suffering to workers and their families, they impose massive economic losses on businesses, communities, and the larger economy. Among the estimated 1.8 million occupational fatalities in Asia, the biggest killers were work-related circulatory and cardiovascular diseases and stroke at 31%, work-related cancers at 24%, work-related respiratory diseases at 21%, and occupational injuries at 15% (Hämäläinen et al. 2017).

Size and coverage of Asia's workplace wellness sector

The workplace wellness market covers employer expenditure on programs, services, activities, and equipment deployed to improve their employees' health and wellness (GWI 2018). These efforts typically seek to raise awareness, provide education, and offer incentives that encourage employees to adopt healthier lifestyles. Workplace wellness programs target a wide range of employee behavior—lack of exercise, poor eating habits, smoking, and lack of sleep—and risk factors such as chronic illness, obesity, addiction, depression, and stress.

Programs can encompass a variety of services, products, and platforms: health screening, diagnostic testing, in-house amenities or subsidized memberships for fitness clubs and exercise classes, healthy food offerings in company cafeterias, wearable fitness trackers, incentives for participation in wellness activities, and health fairs, educational programming, and counseling services for wellness. While some companies may design and administer their own wellness programs, a sizable industry of third-party service providers has emerged to administer these programs for companies. In addition, many private insurance companies administer wellness programs for the companies whose employees they insure.

The workplace wellness market in Asia was estimated at $9.3 billion in 2017, almost a fifth of $47.5 billion in workplace wellness expenditures worldwide. Market size varies widely from country to country (Table 3.5). Asia's workplace wellness expenditures grew by 5.1% annually from 2015 to 2017 (GWI 2018). This indicates that worker wellness is gaining some attention in Asia, motivated by growing concerns about managing health care costs, boosting productivity and competitiveness, and improving employee morale, recruitment, and retention. A recent survey of office-based companies in the Asia and the Pacific found that 60% of those surveyed already had some type of workplace wellness program or intended to start one in the near future (CBRE Group 2017).

Current workplace wellness expenditure in Asia is low, as it is globally, when viewed from the perspective of employee coverage. The 97.8 million workers in Asia estimated to benefit from some form of workplace wellness program are only 5.2% of all employed workers in the region. This compares poorly with an estimated 9.8% of workers globally who benefit from workplace wellness programs (GWI 2018). Across Asia, workplace wellness is still not a widespread concept, benefiting only a small slice of workers—mostly those who work for multinational corporations and in such knowledge-intensive areas as finance, investment, consulting, information technology, high-tech, higher education, and creative industries, or more inclusively those living in the region's wealthiest countries and cities.

As workplace wellness programs and spending expand in Asia, daunting work-related wellness challenges continue to grow. A 2018 workplace survey in Australia; Hong Kong, China; Malaysia; the PRC; and Thailand found that 51% of employees suffered from at least one kind of work-related stress, 83% had at least one musculoskeletal condition, and health-related productivity loss ranged from 48 to 78 days per year (AIA Vitality 2019). Evidence shows more than 67% of workers in India, Indonesia, the Philippines, and the PRC felt that their work environment caused body pain, and more than 60% said their work environment caused head pain—human suffering that also translates into significant productivity loss (GSK Consumer Healthcare 2017).

Table 3.5 Top 20 workplace wellness markets in Asia and the Pacific, 2017

Economy	Number of workers covered (million)	Share of all employment (%)	Expenditure ($ million)
Japan	21.4	32.8	3,915.2
Republic of Korea	8.3	31.2	1,524.8
Australia	5.9	47.7	1,112.1
Taipei,China	3.5	30.6	634.6
People's Republic of China	33.1	4.3	496.7
Indonesia	2.5	2.1	222.6
Hong Kong, China	1.2	31.5	220.4
New Zealand	1.2	45.6	212.5
Singapore	1.0	27.8	186.5
India	9.2	2.6	184.2
Thailand	1.6	4.1	130.5
Viet Nam	1.5	2.7	119.9
Philippines	1.4	3.5	115.9
Malaysia	0.6	3.9	47.7
Bangladesh	2.0	3.3	40.6
Pakistan	1.8	2.9	36.3
Macau, China	0.1	31.5	20.1
Myanmar	0.9	1.0	18.3
Sri Lanka	0.2	2.7	17.6
Brunei Darussalam	0.1	26.8	7.5

Sources: Yeung and Johnston 2020b; CEIC Data Company Ltd.; ILOSTAT. https://ilostat.ilo.org/data/country-profiles/ (both accessed 2 July 2020); authors' calculations.

Workplace wellness concerns vary widely across countries and economic conditions. In wealthier countries, issues typically revolve around preventable chronic disease, mitigating stress, improving work–life balance, enhancing engagement, and improving workplace culture and management structure. In lower-income countries, a large share of the workforce suffers dire and often life-threatening exploitation and workplace threats to safety and health in jobs that lack employment security and fail to pay a living wage—challenges beyond the purview of typical workplace wellness programs.

Current workplace wellness practices

Most Asian countries provide only limited coverage of workplace wellness, excluding most workers, especially those in contingent, part-time, or informal employment. Further, the participation rate is low even among those who are offered wellness benefits, and no conclusive evidence exists about how effective programs are. This suggests a need to improve

workplace wellness programs, which often suffer from a siloed and reactive approach that aims to fix problems only after they arise rather than prevent them. They tend to overemphasize health problems outside the workplace, rather than problems caused by or otherwise in the workplace, such as physical dangers, rampant stress, and overwork.

To be effective, a workplace wellness framework must be holistic and focus first on wellness challenges that arise within the workplace. At a minimum, employers must ensure physically safe working conditions and healthy environments. Adhering to existing standards and regulations and applying safe and healthy practices should be the baseline for every employer.

However, basic physical health and safety are not enough to meet the demands of the new economic era. Employers need to go further, proactively infusing health- and wellness-enhancing features into physical work environments to encourage motivated, happy, and productive workers. In this context, employers can promote healthy behavior at work through various measures. Ergonomic workstations, standing desks, and cafeterias with healthy food options are some examples. Cultivating a healthy work culture by, for example, recognizing and mitigating overwork and stress—and by supporting healthy habits outside work, such as by providing subsidized gym membership—also contribute significantly to workplace wellness. Finally, employers should pay serious attention to and promote a better work–life balance to ensure the physical and mental well-being of their workers.[4]

3.3 Promoting wellness through infrastructure and planning

The built environment affects people's ability to pursue physical wellness activities. Some cities are pedestrian and bicycle friendly, for example, while others not. More broadly, wellness real estate incorporates human health and wellness as a central concept in urban planning, real estate, and infrastructure development. Wellness real estate was a $134 billion industry in 2017, with Asia and the Pacific accounting for $47 billion (Table 3.6).[5]

Compared with the broader construction and real estate industries in Asia, wellness real estate is a nascent development. Asian consumers are only recently beginning to recognize that the built environment has a major impact on healthy lifestyles, health outcomes, and longevity. The recent rise of wellness lifestyle real estate—the building of homes with wellness features and elements—can be traced to consumer interest in extending wellness experiences from their vacation destinations and leisure activities into their homes and everyday life. In major Asian cities, demand for these types of homes or vacation properties reflects as well environmental concerns and intensifying stress.

Public investment can contribute significantly to wellness-focused built environments. Governments can invest, for example, in infrastructure that encourages physical activity, such as pedestrian sidewalks, paths and trails, and public parks.

Key features of wellness-focused built environments include design and infrastructure that encourage physical activity by building sidewalks, paths and trails, parks, and other options for "active transit" (getting around using muscle power); healthy eating through community gardens, farmers' markets, and edible landscaping; social connections through public spaces and plazas, controlled housing density and setbacks, mixed-use zoning, and community events and programming; and mental and emotional wellness through green space, biophilic design, and public art. Such planning approaches serve multiple purposes, creating neighborhoods and communities that are healthier for residents by enhancing their quality of life, happiness, and well-being.

Wellness infrastructure can engender social capital and trust, which contributes to well-being and happiness. A new but growing body of evidence is demonstrating that the built environment has an enormous effect on relationships and civic life within communities. Many urban planning approaches in recent decades have perversely reinforced individual and societal patterns toward loneliness, isolation, segregation, and distrust. Wellness-focused design and infrastructure emphasizes parks, plazas, and other social and community spaces as critical to creating a healthy living environment for individuals. Investment in the design, upkeep, and equitable distribution of such civic assets and public spaces further engenders trust in public institutions and people, encouraging civic engagement and pride.

Table 3.6 Top 15 wellness real estate markets in Asia and the Pacific, 2017

Market	Size ($ million)
People's Republic of China	19,939.6
Australia	9,471.4
India	6,088.3
Republic of Korea	4,194.8
Japan	2,246.4
Malaysia	917.1
Singapore	818.7
New Zealand	802.6
Taipei,China	652.0
Indonesia	570.6
Viet Nam	482.4
Hong Kong, China	297.7
Thailand	248.2
Philippines	35.0
Macau, China	16.6

Note: The 2018 Global Wellness Institute report *Build Well to Live Well* defines wellness real estate as the construction of residential and commercial and/or institutional properties that incorporate intentional wellness elements into their design, materials, and building as well as in their amenities, services, and/or programming.

Source: Yeung and Johnston 2020a.

3.4 Double burden of malnutrition in Asia: undernutrition and obesity

Recognition is growing of the importance of good nutrition to physical and mental health and to sustainable development. Undernutrition, particularly early in life, is associated with worsened risk of infection, stunted cognition and educational achievement, and, consequently, reduced economic productivity (Hickson and Julian 2018, Madjdian et al. 2018).

Two-thirds of the 49.5 million children around the world under 5 years of age who are diagnosed as wasted, or abnormally low weight for their height, live in Asia. Over half of pregnant women in South Asia, meanwhile, are anemic, meaning they suffer iron deficieny (Harding et al. 2018, FAO et al. 2019). Annual economic losses from low weight, poor childhood growth, and micronutrient deficiency in Asia equal an average 11% of GDP (UNICEF 2019).

At the same time, the prevalence of obesity and diet-related chronic disease are increasing rapidly in tandem with rising living standards and greater food availability.

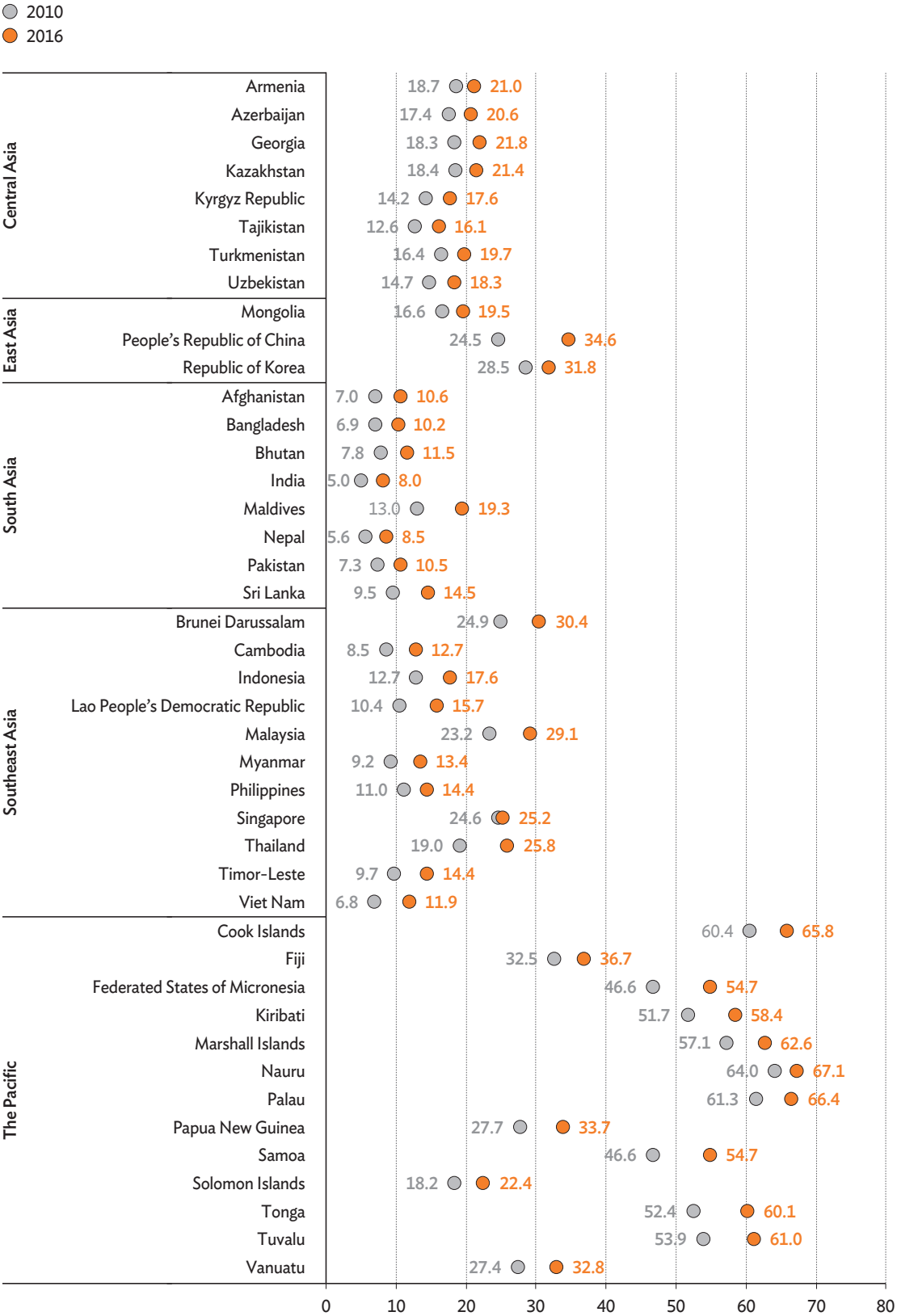
Poor nutrition caused by unhealthy diets is also associated with an increased risk of being overweight or obese and contracting diabetes, cardiovascular disease, and some cancers, notably of the colon, pancreas, and breast (Grosso et al. 2017, Jannasch et al. 2017, Schwingshackl et al. 2017). Diets high in fruits, vegetables, whole grains, legumes, seeds, nuts, fish, and dairy—and low in processed meat, sweets, and salty foods—have been shown to reduce the risk of chronic lifestyle disease (Maghsoudi et al. 2016, Ndanuko et al. 2016, Guasch-Ferré et al. 2019, Schwingshackl et al. 2019).

Asians eat more these days but not necessarily better. Overweight and obese conditions are on the rise in Asia and the Pacific (Figure 3.3), generating significant economic costs. The annual burden of direct medical costs has been estimated equal to 0.78% of GDP (Helble and Francisco 2018). Diets in Asia and the Pacific have changed rapidly with improved living standards, modernization, and globalization. Consumption of fruits and vegetables remains low in many countries, however, while consumption of refined staple carbohydrates, such as white rice, dominates many diets. Consumption of highly processed foods has risen dramatically over the past 20 years (Baker and Friel 2016, Sievert et al. 2019b).

Countering malnutrition should be a regional priority because it imposes significant personal, social, and economic costs in Asia and the Pacific. While diets have become in most countries more diverse and sufficient in calories, challenges remain in countries with very low incomes. As caloric intake improves, the region faces the emerging challenge of unhealthy diets as the consumption of fat, sugar, and highly processed food rises. Population segments at high risk of poor dietary intake include young children during weaning, women and girls, households with low incomes, and rural landless households.

Food environments are improving across the region as calorie availability per capita rises (Figure 3.4). In all but 8 of the 34 ADB developing member countries for which data are available, supply now exceeds 2,500 calories per capita per day, a widely used benchmark for calorie sufficiency.[6] Food prices are fairly stable, but high prices for nutritious foods contribute to both undernutrition and unhealthy diets. Despite improved standards, food safety remains a challenge across the region, particularly in informal settings. Higher incomes, urbanization, and globalization are changing diets by affecting food availability, marketing, and retail.

Figure 3.3 Prevalence of overweight and obese children aged 5–9 years, %



Source: Thow, Farrell, Helble, and Rachmi 2020.

While urbanization can improve access to a variety of foods, urban residents tend to eat out more and consume more processed food. Food has become less expensive and more readily available, mitigating food insecurity and malnutrition but encouraging unhealthy eating with too much intake of calories, sugar, salt, and fat. Trade liberalization has made food supply chains more resilient, enabling year-round access to all kinds of food, seasonal or not, but can also worsens markets' vulnerability to global price shocks and perversely make unhealthy processed food more available and affordable.

Figure 3.4 Calorie availability by subregion and economy, 2000 and 2017

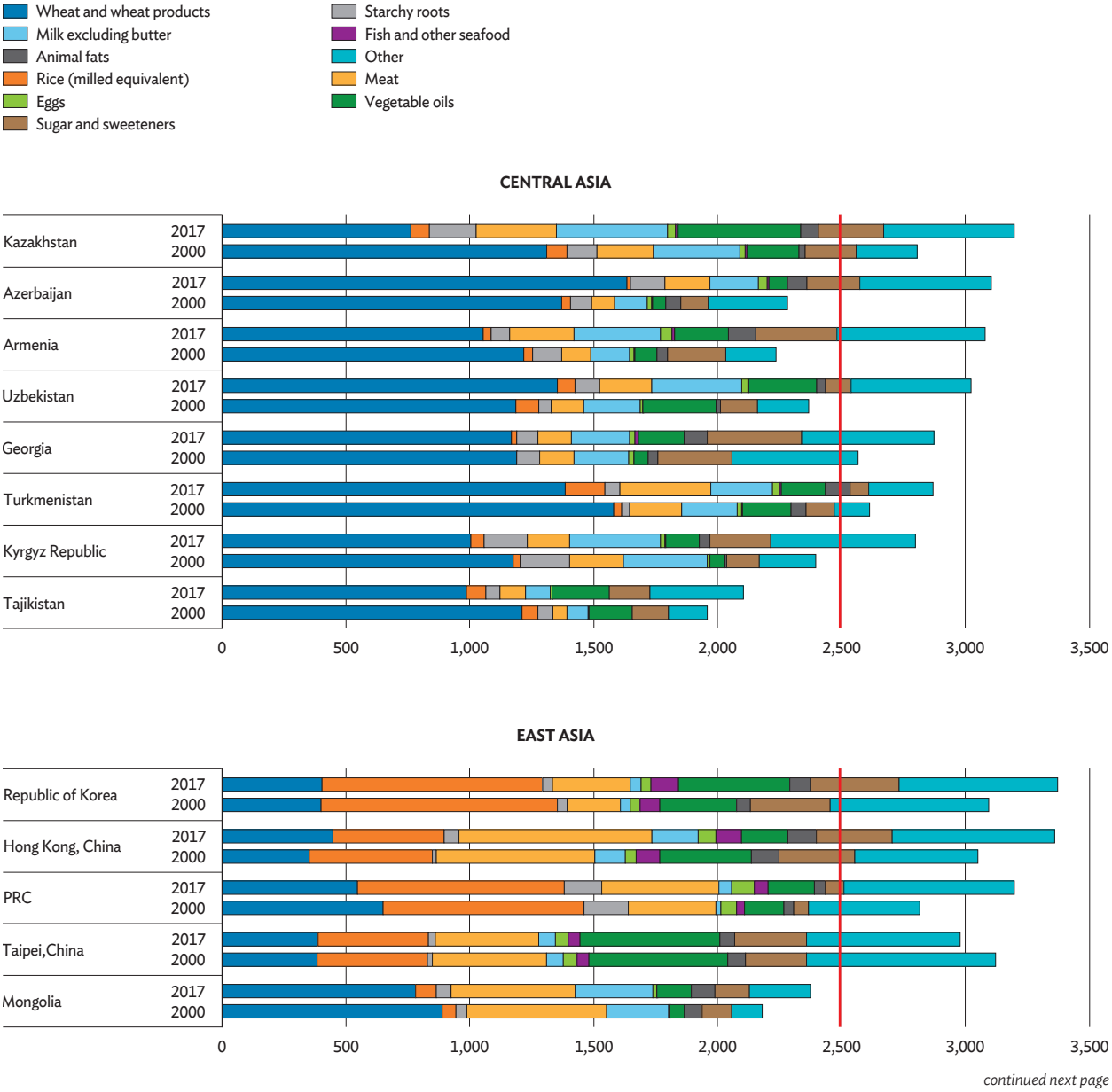


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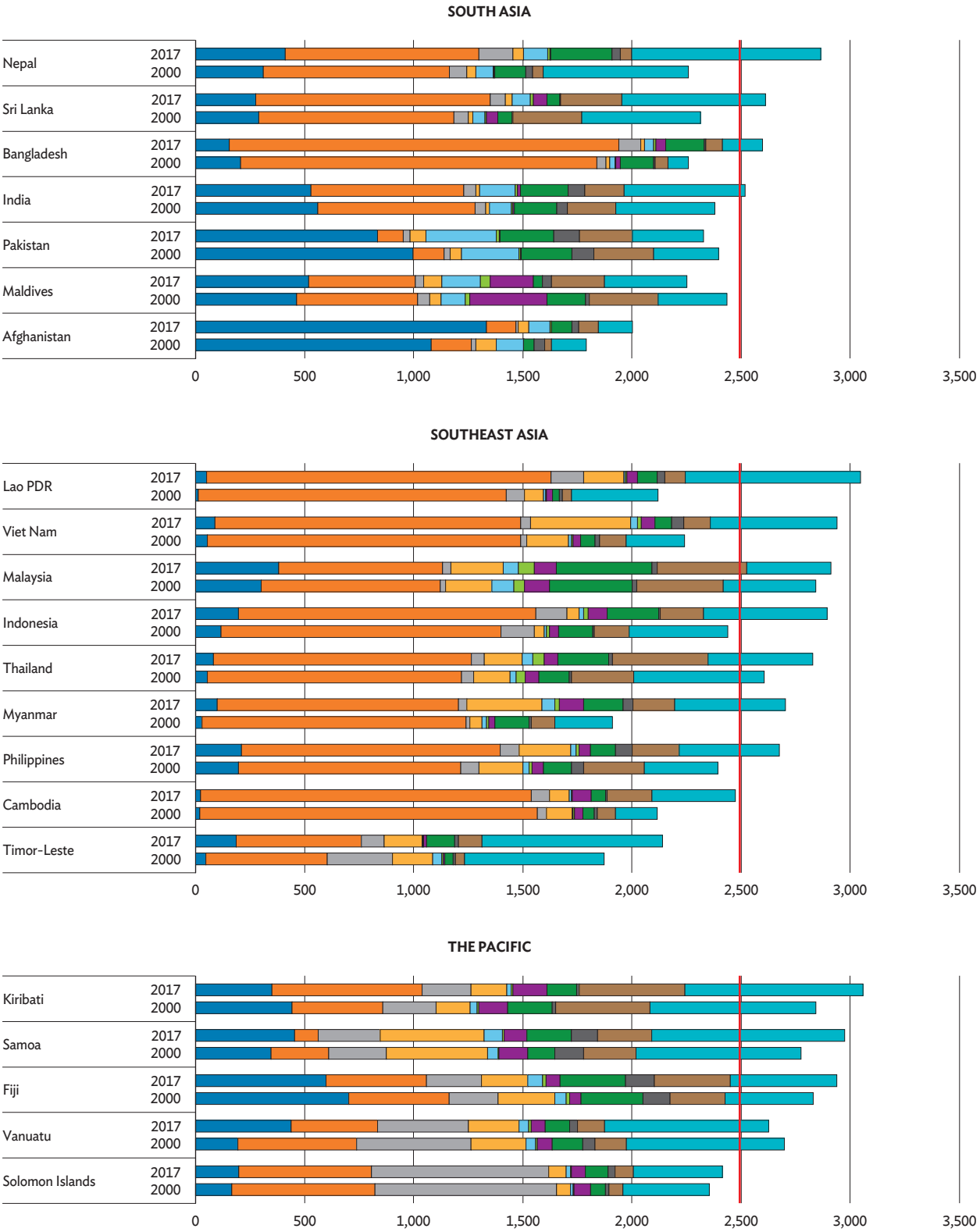
Figure 3.4 *Continued*



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Note: The economies included are those in the region for which 2017 FAO Food Balance Sheet data are available.
Source: Thow, Farrell, Helble, and Rachmi 2020.

In line with these changes in diet and the food environment, the prevalence of undernutrition has been reduced, but, in common with world trends, evidence exists in the region of a worsening double burden of malnutrition at every level: household, community, and nation. Undernutrition remains pervasive, and obesity rates are increasing in all countries. Obesity has risen across the region in all income groups but especially lower income (Helble and Sato 2018). Higher obesity rates translate into higher risk of developing diabetes and a number of cancers, imposing substantial costs to human well-being, family budgets, and health care systems. Further, high prevalence childhood obesity predicts further increases in obesity rates. Finally, all forms of malnutrition hamper educational attainment and productivity.

Policies that favor the supply of healthy food and encourage demand for it, such as taxes on sugary drinks and public education on nutrition, can guide consumers toward better diets and minimize the burden on the public health care system. Efforts to improve policy should integrate nutrition interventions to prevent undernutrition and obesity and diet-related lifestyle diseases, promote nutrition-sensitive social welfare, and strengthen agriculture and supply chains to promote healthy foods, sound food environment policies, and innovation.

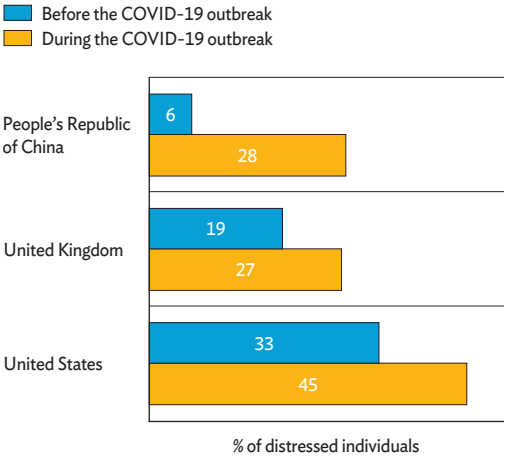
4 Leveraging Asian traditions for mental wellness

Being physically fit is only half of the well-being and happiness equation. The other is mental wellness. A state of holistic health requires sound mind as well as sound body. While the boundary between physical and mental health is sometimes blurred—as exhaustion from overwork, for instance, harms both body and mind—it is nevertheless conceptually useful to distinguish the two. This section explores the activities, choices, and lifestyles that Asians may pursue to achieve mental well-being. Both individual and community approaches exist to reduce the burden of mental illness and promote mental well-being throughout the wellness lifespan. Prioritizing the mental health of Asians has become urgent in view of the region's rapidly aging population. Fortunately, Asia can draw on an abundance of wellness traditions. The region also has a growing wellness tourism industry, which can greatly benefit the mental health of Asians.

4.1 The road to mental wellbeing

COVID-19 is a physical health crisis but it can also sow the seeds of a mental health crisis. Further, the pandemic is not only an alarming public health crisis but also a severe economic crisis. Large segments of the population are in psychological distress around the world (Figure 4.1).[7] Surveys conducted by Ipsos in 27 countries showed COVID-19 dominating the concerns of people worldwide, with the COVID-19 score in April the highest recorded since the survey started 10 years ago and still groundbreakingly high in June (Gebrekal 2020). In opinion polls conducted in several individual countries, including Canada, the United Kingdom, and the US, respondents report their mental health harmed by worries and stress over COVID-19 (Angus Reid 2020, Office for National Statistics of the United Kingdom 2020, National Public Radio 2020, and Morning Consult 2020). With the pandemic fueling people's anxiety worldwide, health concerns are the immediate cause of the distress. Many people are afraid of being infected, losing their lives, or losing loved ones to the pandemic. Lockdowns, community quarantines, and stay-at-home restrictions have cut individuals off from friends, colleagues, and relatives. Confinement in the small space of one's home and a sense of isolation from society weigh on mental health.

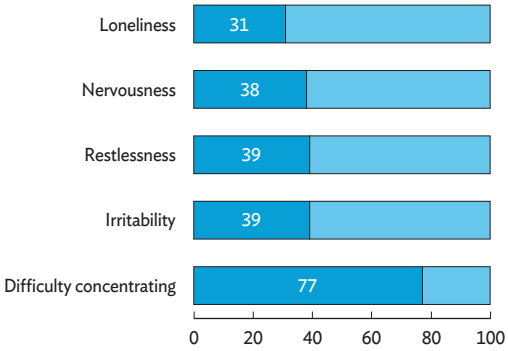
Figure 4.1 Prevalence of mental distress in the population during COVID-19



Sources: Panchal et al. 2020; Pierce et al. 2020; Shi et al. 2020; United Nations 2020.

Stress, anxiety and fears about personal health, and social separation and loneliness are compounded by economic hardship. The mental health of all population groups, including children who cannot go to school or socialize with their friends during lockdowns, has been adversely affected by COVID-19 (Figure 4.2).

Figure 4.2 Parents' reports of children's difficulties during COVID-19 confinement



Source: United Nations 2020.

Defining mental wellness

The process of maintaining mental wellness is viewed as lifelong and entails developing the skills and knowledge to make conscious and intentional choices toward living a healthy, purposeful, and fulfilling life. This lifelong process enables individuals to realize their potential, cope with daily stresses, work productively and contribute meaningfully to their family, community, and society (Bodeker et al. 2018).

The following are the various constructs underlying mental health and well-being that societies must begin to consider:

Emotional well-being. This refers to the experience of positive feelings, such as happiness, and the perception that one's life overall provides satisfaction (Diener et al. 1999, Magyar and Keyes 2019).

Psychological well-being. This relates to the different modalities of positive functioning wherein individuals realize their potential in terms of autonomy and personal growth. Those with high emotional well-being feel good about life, while those with high psychological well-being or social well-being are resilient and function well in their daily routine (Patel et al. 2018, Magyar and Keyes 2019).

Resilience and balance. Good mental health includes resilience, which is the capability to adapt extraordinarily well in the face of significant adversity or risk, rather than simply cope with the normal stresses of life (Christmas and Khanlou 2019, Tusaie et al. 2007, WHO 2016). A more recent definition of well-being calls it "the balance point between an individual's resource pool and the challenges faced" (Hanc, McAndrew, and Ucci 2018).

Optimal functioning, or flourishing. This is now also a common approach in well-being research, as pioneered by positive psychology founder Marten E. Seligman. The optimal perspective aligns the definition of wellness to endeavors that strive to capture the complex nature of human flourishing—that is, through positive emotion, engagement, relationships, meaning, and accomplishment rather than just preventing or ameliorating mental illness (Seligman, Parks, and Steen 2004; Hanc, McAndrew, and Ucci 2018).

The Lancet Commission defines mental wellness as "an asset or resource that enables positive states of wellbeing and provides the capability for people to achieve their full potential" (Patel et al. 2018). The challenge of demarcating the differences between mental wellness and disorder is such that an individual may struggle with symptoms of mental disorder but still be able to maintain a degree of mental health in terms of their expectations of life satisfaction, flourishing, and achieving their potential. The association between mental health and disorder is not linear, though they may seem to exist on a continuum.

The United Nations' *World Happiness Report 2017* identifies four social foundations of well-being: social support, the freedom to make life choices, generosity, and the absence of corruption in government and business. Among the many findings cited, two key social variables—social support and volunteering or generosity—are consistently associated with better self-reported health status.

Rising concern about mental unwellness in Asia

Poor mental health is the third-largest contributor to years lost to disability, after lower-back pain and headache. Across Asia and the Pacific, a growing percentage of the adult population experiences a diagnosable mental illness in any given year: from 4% reported in Singapore to 20% in Australia, New Zealand, Thailand, and Viet Nam. Prevalence rates have also increased in India, Japan, Malaysia, the PRC, and the ROK (Yates 2018).

Data from the World Health Organization and the Organisation for Economic Co-operation and Development identify the five leading mental health problems in Asia and the Pacific to be depression, anxiety, post-traumatic stress disorder, suicidal behavior, and substance abuse (Bodeker 2020b). Few of these conditions are adequately addressed in the region.

The past few years have seen efforts in Asia and the Pacific to raise the profile of mental health, establish legal and policy frameworks for more comprehensive and coordinated disease management, expand investment in infrastructure and human resources, and reduce the stigma attached to poor mental health. This is partly in response to the heavy economic toll exacted by mental illness. Without factoring in suicide, mental health issues are projected to reduce output in India and the PRC by more than $9 trillion each from 2016 to 2030 (Gietel-Basten 2018).

Lower-middle-income countries such as India, Indonesia, Pakistan, the Philippines, and Viet Nam face many challenges, including insufficient medical treatment, meager health-care budgets typically at less than 1% of GDP, lack of capacity to spend funds effectively, dilapidated facilities, and critically low numbers of mental health professionals. India and Indonesia, for example, have only about 0.3 psychiatrists per 100,000 population (WHO 2020b).

The PRC has about 2.2 psychiatrists per 100,000 people. Li (2017) estimates that 92% of an estimated 173 million people in the PRC who suffer mental disorders go without appropriate care.

Common goals across the region include deinstitutionalization and changing the focus of mental health management from secondary care to integrated community-based care with multidisciplinary inputs. Yet, while global models of mental health prioritize the individual, more family-oriented cultures prevail in Asia and the Pacific. This family orientation to mental health may, on the one hand, complicate moves to expand community-based services and access to professional care, especially if a lack of funding obliges families to accommodate patients. On the other hand, it opens new opportunities for preventive and supportive care that align better with a shift toward patient-centered and integrated mental health care. This holds strong potential for strengthening mental wellness pathways and alleviating anxiety and depression, which are the leading causes of mental health problems in Asia and their economic burden in the region.

Overview of mental wellness modalities

Wellness modalities are a range of activities and programs that have positive effects on mental well-being. This section provides a general introduction to a few mental wellness modalities, including both healthy everyday routines such as eating well and exercising regularly, and more specialized activities such as dance and meditation.

Good nutrition is vital to mental wellness. The International Society for Nutritional Psychiatry underscores the importance of a traditional whole-food diet with lots of vegetables, fruits, seafood, whole grains, lean meat, nuts, and legumes, while avoiding processed foods. Such a diet is more likely to provide the nutrients that afford resistance to mental disorders.

The gut–brain axis has emerged in recent studies—reported most notably in a collection of articles published by *Nature* in 2017—as a key pathway for modulating behavior. Bidirectional signaling reportedly exists between the gastrointestinal tract and the brain, often involving gut microbiota, that are vital to regulating satiety and hunger, as well as inflammation. Disruption of the gut–brain axis has been found in a diverse range of diseases, including Parkinson's disease and irritable bowel syndrome. Research has additionally associated gut disorders, known as functional gastrointestinal disorders, with both depression and anxiety (Pinto-Sanchez et al. 2017). A substantial body of research is now examining the benefit of nutrient supplementation in people with mental disorders (Firth et al. 2019).

Exercise is another important component of mental wellness. In addition to the well-documented effects of exercise on longevity and the quality of life, the scientific literature shows an emerging body of evidence that exercise benefits mental well-being (Lear et al. 2017). One such study demonstrated how exercise can serve as a secondary treatment for patients with major depressive disorder (Trivedi et al. 2011). Exercise in general brought significant improvement to patients in the study, though a higher-dose exercise program was found more effective. A succeeding study found the response of a patient to an initial exercise session, particularly a high-intensity one, to be a reliable predictor of treatment outcome for depression (Suterwala et al. 2016). Such knowledge can help clinicians predict the treatment response to exercise in depression and thus enable them to match patients with the right exercise treatment (Suterwala et al. 2016).

Some studies document a positive effect on mental health of two well-known Asian exercise modalities, yoga and tai chi. A survey of yoga research concludes that yoga has a positive effect on health in the workplace, particularly in reducing stress (Valencia et al. 2019). Many studies have found significant beneficial effects from yoga on stress, anxiety, fatigue, and depression, with improved well-being and vigor. Several studies also found less depression after extended yoga practice over a couple of months. In all studies, yoga was found to have improved sleep efficiency and quality, with more sleep time and fewer awakenings.

Military veterans with post-traumatic stress symptoms took part in a four-session introduction to tai chi in Boston. In addition to reporting high satisfaction with the program, participants reported feeling very engaged during the sessions and found that tai chi helped them manage such distressing symptoms as intrusive thoughts, difficulty in concentration, and physiological arousal (Niles et al. 2016). A map of 107 systematic reviews of tai chi published in 2016 identified a number of areas with evidence of potentially effective treatment. In addition to positive effects on physical health, tai chi improved cognitive performance and mitigated depression (Koch et al. 2014).

Apart from eating well and exercising regularly, other specialized activities such as dance and meditation can also help build a sound mind (Box 4.1).

4.2 Asia's wealth of wellness traditions

Asians have a plethora of richly developed wellness traditions to draw upon in their quest for mental and physical well-being. For quite some time, in their rush toward economic growth and modernization, Asians neglected and overlooked these valuable assets to some extent. In recent years, though, in line with rising affluence and demand for well-being, Asians have begun to rediscover their wellness roots.

Box 4.1 Dance and meditation as specialized mental wellness activities

Two specialized activities that contribute to better mental health are dance and meditation.

Dance. The diverse cultures of Asia boast many traditional dances influenced by the region's various religions, rituals, and mythical stories, and dancing remains popular in modern-day Asia. In the People's Republic of China (PRC), an estimated 100 million people or more, primarily older women, pour into public squares and parks daily to engage in a variety of dances, from tangos and waltzes to traditional Chinese dance (NDTV 2018). The country's 2016 national fitness plan identified square dancing as a team sport to be vigorously developed. Square dancing eventually became an official event in the PRC National Games in 2017, along with traditional sports such as athletics and swimming.

A quarter of a century of research has underscored the benefits of dance and dance movement therapy on generalized mental well-being (Koch et al. 2014) and brain development in adults and children (Brown and Parsons 2008, Karpati et al. 2015); on mood stabilization in adolescents (Anderson et al. 2014); and in reducing depression and anxiety across different ages (Bräuninger 2012). In short, dance has been shown to combine many different factors that help improve the competence needed in everyday life (Ritter and Lowe 1996).

A *New England Journal of Medicine* study examined physical and cognitive activities associated with reduced risk of developing Alzheimer's disease. It associated cognitive activities such as reading, playing board games, and playing musical instruments with lower risk of dementia. Of 11 physical activities, dancing was the only physical one associated with a lower risk of dementia (Verghese et al. 2003). Further, such mental health conditions as anxiety and depression have been reduced through participation in dance and dance movement therapy.

Meditation. Meditation is exercise for the brain and has been shown to help maintain mental health and improve memory and empathy, among other benefits. A meta-analysis in the *Journal of the American Medical Association* identified almost 19,000 studies on different forms of meditation. Four decades of studies highlight how meditation enhances immunity, reduces depression and anxiety, improves academic performance, slows age-related cognitive decline, boosts happiness and the quality of life, and helps manage and reduce trauma.

Brain changes associated with the practice of meditation include enhanced neural plasticity and increased grey and white matter development. Recent studies of transcendental meditation found reduced anxiety (Tomljenović, Begić, and Maštrović 2016) and post-traumatic stress (Rees et al. 2014) and improved mental health in caregivers (Nidich et al. 2015). A study of survivors of the devastating earthquake and tsunami in Japan in 2011 found improvements in both mental and physical symptoms in patients who had been instructed in transcendental meditation (Yoshimura et al. 2015).

With benefits ranging from enhanced mental well-being to a reduction of deeply traumatic stress, and from changes in brain structure and functioning to changes in gene expression and reduced age-related decline, meditation stands as a primary pathway for lifelong enhancement of physical and mental wellness.

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Source: Bodeker, G. 2020b. *Mental Wellness in Asia*. ADB.

Asian governments are similarly placing higher priority on wellness traditions. In 2014, for example, the Government of India set up a new ministry of ayush—combining ayurveda, yoga and naturopathy, unani, siddha, and homeopathy—to promote the development of traditional medicine. Yet, the region needs to do much more to capitalize on its traditions that enhance well-being and thereby reduce the burden of poor health on governments, national economies, and society. Ideally, this can be done in a manner that is evidence-based but still culturally relevant, providing to people economical ways to independently manage their health.

Asia is home to two major systems of traditional health knowledge: traditional Chinese medicine and Indian ayurveda. Both systems are grounded on principles of living healthily and well throughout the human lifespan. Lifestyle is given primary emphasis over medicine in the classical texts. East Asia and Viet Nam are strongly influenced by traditional Chinese health knowledge, especially the knowledge in the classic texts *Sun Simiao's Encyclopaedia of Medicine* and *Huangdi Neijing*. The health traditions of South Asia and most of Southeast Asia are grounded in ayurvedic theory and practice, which have as their core text *Charaka Samhita of Ayurveda*.

The guiding principle underlying these Asian traditions of wellness is that understanding people's different metabolic styles should be the basis for developing personalized preventive health and wellness routines. Also of primary importance in Asian wellness theory and practice is an individualized and balanced approach to nutrition based on body type and traditional food culture. Integrative exercise is also prioritized along with stress reducing and integrative breathing and meditative practice. A regular connection with nature is seen as a balancing influence on overall well-being.

Many practices from Asian wellness traditions have become widely popular in the West, generating a sizeable global economy around yoga, tai chi, Asian massage, and Asian herbal supplements, among other traditions. This has spurred a surge in research into the health benefits of Asian health and wellness practices. Scientific journals now exist for studies on Chinese medicine, Japanese medicine (*kampo*), Korean medicine, ayurvedic medicine, and so on. This has generated a large body of evidence not only on the medicines from Asian health traditions but also on their lifestyle practices and preventive strategies, such as integrative exercise programs like yoga and tai chi and the untapped potential of Asia's vast diversity of martial arts practices (Table 4.1). By and large, the evidence indicates that Asia's wellness traditions can significantly contribute to physical and mental well-being (Bodeker 2020a).

Table 4.1 Selective list of Asian martial arts

Taekwondo	Republic of Korea
Iaido and judo	Japan
Sinmoo hapkido	Japan
Clinch fighting, Chinese style	PRC
Wing chun	PRC
Kuntao-silat	Indonesia, Malaysia, the Philippines, and Singapore
Chen taijiquan	PRC
Ryukyu kenpo	Japan
Baguazhang	PRC
Kodokan judo	Japan
Muso shinden-ryu iaido	Japan
Goju-ryu karate	Japan
Zheng-style taijiquan	PRC
Ryukyu kobudo shinkokai	Japan
Mantis boxing	PRC
Arnis, also called kali, eskrima, or escrima	Philippines
Jujutsu and judo	Japan, Brazil
Niten ichi-ryu and shinto-ryu	Japan
Ving tsun double knives	Hong Kong, China
Bajiquan	PRC
Goshin jutsu and washin-ryu	Japan
Taiji spear	PRC
Kalarippayattu	South India
Thang-ta	Northeast India

PRC = People's Republic of China.
Source: Bodeker 2020a.

The World Health Organization and national health administrations now recognize that lifestyle changes are the only effective way to reverse the rise of chronic lifestyle diseases. With the evidence base that has been built in support of Asian wellness traditions—that is, their efficacy in lowering noncommunicable disease risk, reducing stress and mental health issues, and enhancing longevity and the quality of life—Asia now has an opportunity to integrate its own cultural traditions into national and regional health guidelines. Apart from fostering Asia's own cultural heritage, this development can reduce costs in national health systems and open up economic opportunities for wellness tourism and create new possibilities for entrepreneurship. However, fostering Asia's rich wellness traditions must not come at the expense of environmental degradation, for instance encroachment on wildlife.

Asia's dietary traditions

Asian diets feature a diversity of vegetables and fruit, including many plant foods that are beneficial to health. Many food preparation methods use microorganisms, now understood as critical to healthy digestion and physical function.

A growing body of evidence indicates that chronic disease increases when people start to lose touch with ancestral food traditions. This has awakened interest in traditional and indigenous food cultures in Asia, which are important not only for their own sake, but for the legacy of food knowledge they can confer on future generations. A concern is a lack of documentation of many of these traditions.

Asian diets are known for incorporating medicinal ingredients. One can find *reishi* mushrooms in Japanese cuisine, *goji* berries in Chinese menus, and turmeric and other potent medicinal species in Indian recipes. Malaysia has its *ulam*, a unique and pharmacologically potent medicinal herbal salad (Table 4.2). Indonesia meanwhile has its *jamu* herbal beverages, which are based on nature's most powerful anti-inflammatory agent, turmeric, and a powerful digestive agent, ginger.

Research has shown that lower calorie intake and higher amounts of plant-based nutrients and antioxidants—common features of traditional diets—help prevent the development of such chronic conditions as obesity, diabetes, heart disease, cancer, and rheumatism.

Table 4.2 Some components of Malaysia's ulam salad and their health properties

Jantung pisang (banana blossom)	An edible flower from the banana plant, its common name literally translates as "banana heart." The tender inner core is usually served lightly blanched or in kerabu, a fragrant, tangy, and spicy local salad. The flower has antimicrobial properties.
Temulawak (Java ginger, *Curcuma zanthorrhiza*)	Traditionally consumed as an herbal remedy, it can be eaten fresh for a sourish, bitter taste. *Curcuma zanthorrhiza* is used as a medicinal plant. The rhizome contains 5 milliliters of an ethereal oil per kilogram that primarily consists of sesquiterpenes, as well as curcumin and starch. *Curcuma zanthorrhiza* is used for dyspepsia and as a spice. Some hold it to be an effective deterrent and pesticide for mushroom mites.
Selom (Java waterdropwort, *Oenanthe javanica*)	Selom is prized by ulam lovers for its delicate lemony taste. Its tender stems and leaf stalks are used fresh as salad, to garnish steamed rice and other dishes, or boiled and chopped as greens. It is high in beta-carotene, ascorbic acid, iron, and protein and extremely high in vitamin E, with medium levels of riboflavin and calcium. Chlorophyll-rich leaves have antigenotoxic and antioxidative properties.
Kerdas (*Pithecellobium bubalinum*)	A thin layer of skin covers the light green seed inside. The fruit emanates a strong smell and is eaten as an appetizer. It is described as having cooling properties and is used to manage fever in Indonesia.
Ulam raja (*Cosmos caudatus*)	Called "king of ulam," it has a grassy taste accentuated by a subtle peppery tinge. It is consumed to enhance blood circulation, and studies have shown it to protect bones and counter diabetes.

Source: Bodeker 2020a.

Traditional medicine in Asia: a need for greater integration

More than half of the Asian population reportedly uses traditional medicine on a regular basis. Usage is higher in rural areas than urban. By income and educational attainment, usage shows a bimodal curve, high at both extremities but lower in the middle. The richer and more educated set typically takes traditional medicine to promote health and prevent disease—that is, for wellness.

Asia has always shown widespread acceptance of traditional medicine at the community level. Such practices have also gained formal recognition over the decades. In 1956, Viet Nam became the first country in Asia to formally incorporate traditional medicine into its national health-care system. The PRC did the same in 1958 and India in 1970. However, instead of offering an integrated model of care, the systems ran on two parallel tracks—modern and traditional—and choosing between them was left largely to the consumer. To fully leverage Asia's rich tradition of traditional medicine, Asian countries must strive to integrate modern and traditional medicine and maximize synergies between the two.

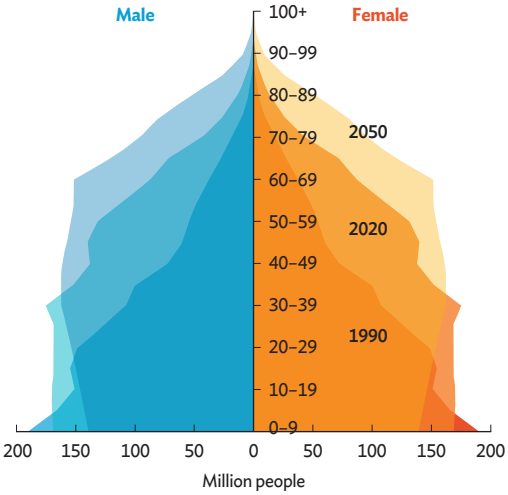
Some developments have already occurred in this direction. In the PRC, for instance, early collaborative research on traditional medicines for fever, or febrifuges, identified the plant *Artemisia annua*, which can be used to manage hot–cold fevers such as those caused by malaria, and thus facilitated the identification of the sesquiterpene lactone artemisinin. This paved the way for the development of an entire new class of antimalarial drugs and the awarding of the 2015 Nobel Prize for Medicine to Tu Youyou, a professor in the Yunan Institute of Pharmacy and the Shangdong Institute of Parasitology.

4.3 Population aging and wellness in Asia

As people grow older, their cognitive and other mental faculties tend to deteriorate, albeit with wide variation among individuals. The worst conditions, such as Alzheimer's disease, severely impair mental faculties. At the same time, physical capability also tends to deteriorate. Asia's aging population therefore makes the need for healthy aging all the more urgent.

The share of developing Asia's population aged 65 or older is projected to rise from 6% in 2010 to 9% in 2020 and 18% in 2050. Figure 4.3 shows the distribution of various age groups by gender from 1990 to 2020 and United Nations projections to 2050. The figure illustrates a striking demographic shift from a typical pyramid shape to a structure that is more top heavy as the population ages. In 2010, only 1 person in 16 living in developing Asia was over 65 years old. In 2050, it could be 1 in 6.

Figure 4.3 Population distribution, developing Asia



Source: UN World Population Prospects 2019. https://population.un.org/wpp/ (accessed 15 January 2020).

Population aging and demand for wellness: empirical evidence

Both mental and physical health deteriorate with age, but people are not powerless to mitigate the negative effects of aging on their mental and physical health. Indeed, by choosing activities and lifestyles that are conducive to well-being, people can age in a healthier way. Some individuals age better than others by taking care of their mind and body. As more and more Asians join the ranks of the elderly, demand for wellness products and services can be expected to grow. Recent Asian Development Bank research provides empirical evidence for a positive relationship between population aging and demand for wellness (Box 4.2).

Box 4.2 Empirical analysis of the link between aging and wellness: data and methodology

Cross-country regression analysis described below empirically tested whether two population variables with regard to aging—share of the population 65 and older and life expectancy—significantly affected three wellness industries: hot springs, spas, and wellness tourism. To evaluate the factors that drive the development of the wellness industry across countries, we used cross-sectional regression with the following specification:

$$Y_i = \beta_0 + \sum_{j=1}^{k} \beta_i X_{ij} + \epsilon_i,$$

where k is a set of explanatory variables X_j that includes GDP growth rate, log GDP per capita, log financial consumption expenditure per capita, life expectancy at birth, urbanization ratio as a percentage of the total population, the ratio of people 65 and older to the total population, and socioeconomic conditions in each country i. In the analysis, 1-year lags of the explanatory variables were used to explain the development of wellness industry in the sample countries. All dependent variables were log transformed in the analysis.

The Global Wellness Institute served as the primary data source for the dependent variables in this study. It has conducted country-level research to define and quantify five segments of the wellness economy: wellness real estate, workplace wellness, wellness tourism, spas, and thermal and mineral springs. For the other five sectors, it drew upon secondary sources to produce a global aggregate figure. In our analysis, the number and revenue of hot springs, spas, and wellness tourist arrivals were selected as proxies for the wellness industry. The sample included 124 global economies in 2017.

Data on the GDP growth rate, GDP per capita, financial consumption expenditure per capita, urban population as a percentage of the total population, and life expectancy at birth were collected from the World Bank's World Development Indicators. The ratio of people 65 and older to the total population was from the United Nations Population Division. Political risk rating on socioeconomic conditions was collected from the PRS Group's International Country Risk Guide. The socioeconomic variable was an assessment of the socioeconomic pressures at work in society that could constrain government action or fuel social dissatisfaction. The risk rating score had three subcomponents: unemployment, consumer confidence, and poverty.

The study found that a 1% increase in population aged 65 and older increased the number of hot spring establishments by 20% and raised their revenue by 29%. The evidence also supported a significant positive link between life expectancy on the one hand and spas and wellness tourism on the other. While more research needs to be done on the aging–wellness nexus, the research suggests that, as populations grow older, they demand more wellness to safeguard mental and physical health.

Source: Bodeker, G., M. Pundit, S. Tian, and P. Quising. 2020. *Aging and Wellness in Asia*. ADB.

Pathways to living a long and healthy life

Longevity is a blessing that is multiplied many times over if it comes with sound body and mind. Many of the diseases suffered by older people result from dietary factors, some of which start operating in infancy. Traditional Asian diets have much to offer toward reducing the risk of lifestyle diseases and are culturally more acceptable than the widely recommended Mediterranean diet. Policies on food, agriculture, and trade—originally devised to ensure food quantity rather than quality—must remove incentives to produce less healthy foods. They must instead create incentives to produce diverse and nutritious foods using sustainable practices, generating healthy food environments supported by nutrition education, especially in schools.

Exercise is one health-promoting approach that has excellent potential to support aging populations. The health benefits of exercise for older people include reduced risk of coronary and cardiac disease, diabetes, obesity, and some cancers such as colorectal cancer, as well as reduced risk of falls (Sims et al. 2006). In addition to reducing the risk of many health conditions and chronic diseases, exercise can improve the quality of life through improved mental heath, with reduced depression and better moods, and improved physical performance in terms of balance, strength, mobility, and function.

Tai chi is an excellent form of exercise for older people and has been shown to improve strength, balance, and cardiovascular performance. Dance is another especially beneficial form of exercise for older people. Dance promotes social exchange and is a form of movement that communicates, thus activating communication areas of the brain. It has shown benefits by reducing the symptoms of both Parkinson's and Alzheimer's disease. Social support, especially friendship and meaningful social interaction, are vital to ensuring mental well-being later in life. The Japanese philosophy of *ikigai* highlights the essence of a purposeful life with good nutrition, regular movement, solid social networks, and a positive outlook anchored on a smile—all contributing to optimal aging into later years.

Aging at home is desirable only if the home meets the special needs of the elderly. Desirable goals with respect to aging in place include optimizing function through improved home design, caregiving, and reducing isolation with social network and support and the help of technology. Enabling elders to live at home rather than enter a care institution or be hospitalized reduces the economic burden of a growing population of frail elderly and provides humane options for those who are vulnerable.

Age-friendly environments outside of the home include immediate surroundings and urban characteristics further from home, such as walkability, supportive neighborhoods that build a sense of community, green spaces, and designs for healing environments such as hospitals.

Through its Global Age-Friendly Cities Project, the World Health Organization offers direction and guidelines for planning toward keeping the elderly active in their home environments.

The impact of retirement on wellness is ambiguous. On the negative side, people often suffer psychologically if they can no longer view themselves as productive contributors to society. On the positive side, retirement can be an opportunity to restart life with more freedom and time to build relationships and engage in health-improving activities. In the end, what matters for old-age wellness is to stay mentally and physically active and fit during retirement by eating well and exercising regularly, and by engaging in intellectually stimulating activities. Social engagement and participation in leisure activities positively affect life satisfaction in retirement, especially by alleviating depression in the oldest members of society, 75 and older (Hajek et al. 2017).

4.4 Global rise of wellness tourism

People typically vacation to take a break from exhausting work routines and recharge mind and body. Almost all tourism is rest and relaxation and thus benefits mental wellness. Prior to COVID-19, tourism was one of the largest and fastest-growing industries worldwide. According to the World Travel and Tourism Council, the direct, indirect, and induced impact of travel and tourism provided 10.3% of global GDP in 2019 and 330 million jobs, or 1 job in 10 around the world. The industry grew by 3.5% in 2019, outpacing global economic growth of 2.5%. Indeed, it outpaced global growth for 9 consecutive years.

The tourism industry has been hit hard by COVID-19 with suspended flights, closed hotels, and travel restrictions almost everywhere. Indeed, tourism is one of the industries that has been most severely affected by the pandemic. According to the United Nations World Tourism Organization, arrivals fell by 98% in May 2020 and by 56% in the first 5 months of 2020 (UNWTO 2020). Depending on when travel restrictions are relaxed, international tourism may drop by 58%–78% in the whole year.

The wellness tourism industry around the world

Wellness tourism is travel associated with the pursuit of maintaining or enhancing one's personal well-being. The Global Wellness Institute estimates that wellness tourism was a $639 billion global market in 2017, growing more than twice as quickly as tourism overall. In 2013, the institute unveiled the inaugural edition of the *Global Wellness Tourism Economy* report—a landmark study on the emerging wellness tourism industry, which has since accelerated around the world.

Wellness tourism is a fast-growing tourism segment that expanded annually from 2015 to 2017 by 6.5%, or more than twice the growth rate of tourism overall. Travelers made 830 million wellness trips in 2017, which is 139 million more than in 2015. Growth has been driven by an expanding global middle class, growing consumer desire to adopt a wellness lifestyle, rising interest in experiential travel, and more affordable flights and other travel arrangements. Across regions, Europe remains the destination for the largest number of wellness trips, with North America leading in wellness tourism expenditure (Figure 4.4). Asia has made the most gains in the number of wellness trips and expenditure as strong economies and an expanding middle class stimulated demand. For developing Asia, covering 42 member economies of the ADB, wellness trips in 2017 totaled 209 million amounting to $100 billion.

The wellness tourism market has two broad types of travelers: primary wellness travelers, who are motivated by wellness to take a trip or choose their destination based on its wellness offerings, such as someone visiting a wellness resort or participating in a yoga retreat, and secondary wellness travelers, who seek to maintain wellness or engage in wellness activities during any kind of travel, by visiting a gym, getting a massage, or prioritizing healthy food while traveling.

Figure 4.4 Wellness tourism by region, 2017

Notes: Number of wellness tourism trips and expenditure, inbound and domestic. Regional groupings follow those of the Global Wellness Institute.
Source: Global Wellness Institute 2018a.

The bulk of wellness tourism is attributed to secondary wellness travelers, who in 2017 accounted for 89% of trips and 86% of spending. In 2015–2017, secondary wellness tourism grew by 10% annually, more quickly than primary wellness tourism, at 8%.

Domestic wellness travel dwarfs international wellness travel, but international wellness trips have been growing more quickly. Globally, domestic travel accounts for 82% of total wellness tourism trips and 65% of expenditure. International wellness trips are proportionally a larger share of expenditure because average spending is much higher on international trips. International wellness tourism trips expanded at a faster pace in 2015–2017, by 12% annually, as domestic wellness tourism trips expanded by 9%.

The wellness tourism industry in Asia

The market for wellness tourism in the Asia and the Pacific was estimated at $137 billion in 2017, comprising 257.6 million inbound and domestic wellness tourism trips. Expenditures by wellness tourists include lodging, food and beverages, activities and excursions, shopping, in-country transportation, and other services. Some of the spending items were wellness-related, such as getting a massage, attending a meditation retreat, or staying at a wellness hotel, while others were generic, such as hiring a local car.

Altogether, Asia and the Pacific accounted for 21.4% of global wellness tourism expenditure and 31.0% of all wellness tourism trips in 2017. Asia's largest wellness tourism markets are, in descending order, the PRC, Japan, India, Thailand, the ROK, Indonesia, Malaysia, Viet Nam, and the Philippines (Table 4.3). The Asian Development Bank estimates that the rising wellness tourism industry directly employs 10.1 million workers in the region.

Not only is wellness tourism a sizable and high-growth market, it is higher-yield than tourism in general. Wellness tourists—whether international or domestic—spend more than the average tourist. In 2017, inbound international wellness tourists in Asia and the Pacific spent on average $1,741 per trip, 33% more than the typical international tourist. The premium for domestic wellness tourists was even higher, with average spending of $268 per trip, or 120% more than the typical domestic tourist. This is because wellness travelers are typically affluent, educated, well-traveled, and willing to seek out new and novel experiences.

In recent years, wellness tourism has experienced rapid growth in Asia and the Pacific as more stressed-out people look to travel for respite and rejuvenation. To meet the growing sophistication of Asian travelers, wellness travel offerings have expanded tremendously in breadth and depth, moving far beyond typical offerings such as detox, weight loss, spa treatments in a gazebo, and yoga on the beach.

Table 4.3 Top 20 wellness tourism markets in Asia and the Pacific, 2017

	Number of Trips (thousands)			Expenditure ($ million)
	Inbound	Domestic	Total	
People's Republic of China	7,724.3	62,442.2	70,166.5	31,705.9
Japan	1,585.5	38,900.0	40,485.5	22,466.1
India	4,542.4	51,426.3	55,968.6	16,299.7
Thailand	5,691.9	6,764.1	12,456.0	12,018.4
Australia	876.2	9,122.1	9,998.3	10,520.9
Republic of Korea	1,709.8	17,908.6	19,618.3	7,186.6
Indonesia	5,183.5	3,151.7	8,335.2	6,928.5
Malaysia	3,331.7	4,956.1	8,287.8	5,019.2
Viet Nam	3,149.5	6,465.8	9,615.3	4,001.1
New Zealand	341.0	2,736.5	3,077.5	3,036.0
Philippines	1,552.2	1,169.0	2,721.2	2,592.5
Taipei,China	675.4	3,235.7	3,911.1	2,477.5
Hong Kong, China	1,723.9	360.5	2,084.5	2,439.5
Cambodia	1,741.5	656.1	2,397.6	1,853.7
Singapore	777.7	125.8	903.5	1,159.7
Maldives	483.2	103.8	587.0	938.4
Macau, China	174.9	36.7	211.6	770.9
Sri Lanka	416.8	220.5	637.3	720.2
Fiji	583.5	125.6	709.1	708.5
Nepal	759.2	433.3	1,192.5	611.0

Notes: Including both primary and secondary wellness trips. Expenditure data combine both international inbound and domestic wellness tourism spending.

Source: Yeung and Johnston 2020a.

Across Asian destinations, there has been a tremendous increase in demand for all types of wellness modalities and experiences, from hot springs bathing to sound therapy, from tai chi to reiki, and from meditation to spiritual guidance. With the worsening of air pollution across major cities in India, the PRC, and other Asian countries, some travelers are even traveling in search of healthier air, planning "lung-cleansing" and "smog-escape" wellness trips.

More than 20 countries in Asia and the Pacific now promote wellness on their national tourism websites. Governments in many of these countries actively support the development of wellness tourism products, especially around thermal springs. Some countries promote other wellness assets, such as beauty and traditional bathhouses in the ROK; healthy eating in Viet Nam; meditation, ayurveda, and yoga in Sri Lanka and India; and spirituality, meditation, and healing in Nepal and Bhutan.

Several countries, including Bhutan, India, Malaysia, the Philippines, the PRC, and Sri Lanka, provide economic incentives to companies investing in wellness-related programs. Through its Market Development Assistance Scheme, India, for example, supports new and redeveloped projects in wellness tourism.

Gearing for post-COVID recovery

Before COVID-19, wellness tourism was an important driver of tourism, which was in turn an important driver of economic growth and employment. But wellness and other forms of tourism were hit hard by the pandemic. After it subsides, wellness tourism may offer a faster path to recovery than other segments.

Wellness tourism emphasizes healthy living, well-being, and the preservation of nature and cultural heritage even as it attracts some of the highest-spending tourists. As a segment that emphasizes sustainability and can be considered a model for other tourism segments, wellness tourism offers a possible fast-track to recovery after the virus. Destinations with established strategies will be best positioned to leverage and further develop their wellness tourism segments, benefiting their entire economies and maximizing sustainability. Sri Lanka and Thailand are two Asian countries with concrete strategies (Box 4.3).

Box 4.3 Wellness tourism strategies in Sri Lanka and Thailand

Sri Lanka and Thailand both successfully flattened their COVID-19 curves and began reopening more than most other countries thanks to coordinated, whole-of-government strategies to prevent the spread of the virus. Having benefited from the flattening, the travel and tourism industry is helping to restore both countries' economies. Wellness tourism has been a centerpiece of an industry that is a significant part of the economy in both countries, thanks in part to successfully implemented strategies in each country.

In Sri Lanka, the government has implemented strategies to promote wellness and medical tourism, including economic incentives and simplified project approval procedures for companies investing in wellness-related developments. The country's National Export Strategy, 2018–2022 supports wellness tourism by coordinating the development of traditional and modern health and medical tourism, establishing a quality assurance system for wellness and traditional health systems, and providing an information system for the Sri Lankan health tourism sector and its target markets.

In Thailand, the Tourism Authority launched a health and wellness marketing strategy in 2014 in cooperation with Thai Airways International, Asia Web Direct, and more than 30 providers of health, beauty, and spa treatments. The strategy's digital marketing initiative for health and wellness was aimed at women in Asia and the Pacific. Under the slogan "Find Your Fabulous," the campaign helped promote over 150 packages of wellness and beauty treatments, spa packages, and hotel stays throughout the country. The Global Wellness Institute estimated that Thailand earned in 2017 about $12 billion from wellness tourism from 12.5 million wellness-related arrivals, thus ranking the country 13th globally as a wellness tourism destination.

Source: Wayne, R. 2020. *Analysis of the Global and Asian Wellness Tourism Sector.* ADB.

5 Wellness for happiness and inclusion

Healthier individuals tend to be happier, and wellness activities by their very nature can be sources of happiness. This seems to be true not only conceptually but empirically. The flourishing of wellness industries is highly correlated with greater happiness across many countries, as this section reports. Besides promoting happiness, the wellness economy may also generate more inclusive growth and development by providing greater employment and entrepreneurial opportunities for small local businesses, especially those run by women.

5.1 Asia's low subjective happiness

Interest in happiness has grown since Richard Easterlin showed that income growth may not always correlate with higher self-reported happiness (Easterlin 1974). The economics of happiness has been one of the fastest-growing fields in economics over the past few decades, particularly in the most recent one (Clark 2018, Clark et al. 2018, Frey 2020). Complementing the explosion of academic research on happiness, interest in happiness is growing among policy makers worldwide. Happiness is gradually becoming viewed as a new and important measure of people's well-being and a potential policy target that can complement traditional income measures (Global Happiness Council 2018).

"Happiness" is often used to mean subjective well-being according to a range of individual self-assessments and moods. Among various measures of happiness, the primary distinction is made between cognitive life evaluations and affective well-being (e.g., Helliwell and Wang 2012, Kahneman et al. 1999). Eudaimonic measures, linked to having a sense of meaning or purpose in life, are sometimes collected in surveys.

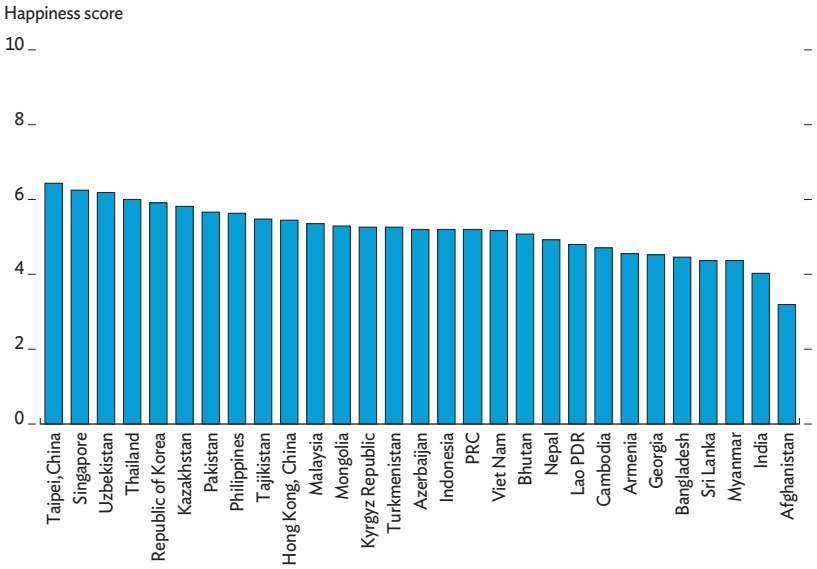
In cognitive life evaluations, the questions revolve around how satisfied people are with their lives overall, how happy they are generally, or how they position their life on a life ladder. For example, the survey question for life satisfaction in the Gallup World Poll asks, "All things considered, how satisfied are you with your life as a whole these days? Use a 0 to 10 scale, where 0 is dissatisfied and 10 is satisfied." In other surveys, the answer might be on 1–5 or 1–4 point scales. As this sort of question was first designed by Hadley Cantril (Cantril 1965), the life ladder score is commonly called a Cantril ladder or Cantril's self-anchoring striving scale.

Happiness in Asia

Happiness is becoming a higher priority for policy makers around the world, including in developing Asia. In the United Kingdom, the Office of National Statistics has randomly sampled residents on happiness since 2012 and used the data to guide policy. Bhutan is probably the best-known global example of a wellness-oriented government thanks to its gross national happiness index. The PRC, meanwhile, laid out in 1992 "people's happiness" (*xingfu gan*) as one of its strategic national goals. At the subnational level, the Seoul metropolitan government in the ROK has identified sustainable development and happiness as its main aims.

Figure 5.1 ranks happiness scores in 30 economies in developing Asia.[8] Two important findings emerge from the data, as detailed below.

Figure 5.1 Ranking of happiness in developing Asia



Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.
Source: Wang 2020.

5.2 The wellness economy and happiness

The development of wellness industries can be expected to play an important role in the pursuit of a better quality of life by promoting happiness, either directly or indirectly, through known determinants of happiness: personal income, employment, health, consumption, and leisure time (e.g., Di Tella et al. 2001, 2003, Helliwell and Wang 2012, Helliwell et al. 2019).

Many wellness segments such as recreational physical activities, worksite wellness programs, and spa therapy have been linked with better health outcomes. Studies show that going on retreats brings significant and sustained improvements,

for up to 6 weeks, along several dimensions of health and well-being (Cohen et al. 2017, Gilbert et al. 2014). Spa therapy significantly reduces both absenteeism and hospitalization (Klick and Stratmann 2008), while yoga practice has been shown to promote significant improvements in exercise capacity and health-related quality of life (Desveaux et al. 2015).

There has been less research on the direct correlation between wellness and happiness, with most studies exploring the impact of health activities (Zhang and Chen 2019). Results have been consistent, however, with physical activity in particular seen to contribute significantly to happiness in adolescents and adults around the world (Lathia et al. 2017, Richards et al. 2015, Wang et al. 2012, Min et al. 2017, Norris et al. 1992, Straatmann et al. 2016, Maher et al. 2016). Box 5.1 presents an empirical analysis of the link between wellness activities and happiness.

The results suggest a positive relationship overall between indicators of wellness industries and happiness (box table). This directly associates wellness with happiness, in addition to other contributing determinants of happiness such as health. The findings are stronger for workplace wellness, wellness real estate, and recreational physical activity.

The results found that a 1% increase in workplace wellness spending per capita lifted national happiness by 0.0015 units on a scale of 1 to 10 (Wang 2020). By extrapolation, if workplace wellness spending per capita doubled from the world average of $10.83 to $21.66, happiness would increase by 0.15 units.

Understanding of the wellness–happiness nexus would benefit from more rigorous analysis in the future, when more detailed wellness data become available. One caveat in the empirical analysis is that it covers only some wellness activities on the market. Analysis nevertheless yields some preliminary evidence of a positive association between wellness activities and happiness.

5.3 Wellness and inclusive growth

In addition to promoting happiness, the wellness economy can promote inclusive growth in developing Asia. As seen above, developing Asia has a large wellness economy that has expanded rapidly in recent years as demand for mental and physical health increased in tandem with Asian's growing affluence. As a result, wellness industries have become a major engine of economic growth and job creation. Wellness tourism expenditure in the region, for example, grew by 11% annually in 2015–2017 to $136.7 billion. The industry directly employed 3.74 million in India, 1.78 million in the PRC, and 530,000 in Thailand (GWI 2018b).

Box 5.1 Empirical analysis: data, methodology, and results

Because the Global Wellness Institute has data available for only six wellness segments—hot springs, spas, wellness tourism, workplace wellness, wellness real estate, and recreational physical activity—it is not feasible to empirically examine the correlation between overall wellness development and national happiness. We thus used the data available for the six wellness sectors to perform a preliminary empirical analysis of the relation between wellness segments and national happiness.

The global sample was 146 countries with data on both happiness and the six wellness segments—only 29 of them in developing Asia, making it more practical to perform empirical analysis on the global sample. The study used national data on the six segments from 2017, gathered by the Global Wellness Institute.

Per capita values for each sector were calculated to compare the relative size of each wellness segment across countries. The coefficient of correlation with happiness ranged from 0.46 for log per capita hot spring revenue to 0.81 for log per capita workplace wellness spending by employers. The correlation between log per capita expenditure on physical activities and happiness was 0.80, the second highest among the six wellness segments.

A preliminary empirical analysis of the relationship between wellness industry and happiness was conducted using the following OLS model:

$$Happiness = \beta_0 + \beta_1 x + \beta_2 lngdp + \varepsilon,$$

where *Happiness* denoted national happiness scores averaged over 2016–2018; x denoted the log value of each of the six wellness segments; *lngdp* represented the natural log of GDP per capita in 2017, purchasing power parity adjusted in 2011 dollars; and ε was the error term. The regression controlled for GDP because it was an important determinant of happiness. The coefficient β_1 captured the relationship between the wellness segment and happiness.

Source: Wang. S. 2020. *Wellness for Happiness in Developing Asia.* ADB.

Wellness and happiness in the world: Regression results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Log per capita hot spring revenue	0.07 (0.06)	0.01 (0.05)											
Log per capita spa revenue			0.19*** (0.05)	0.04 (0.05)									
Log per capita wellness tourism expenditure					0.16*** (0.05)	0.03 (0.05)							
Log per capita workplace wellness spending by employers							0.27*** (0.04)	0.15* (0.06)					
Log per capita wellness real estate construction value									0.40*** (0.06)	0.22** (0.07)			
Log per capita expenditure on recreational physical activity											0.43*** (0.08)	0.30+ (0.15)	
Log GDP per capita		0.56*** (0.10)		0.52*** (0.10)		0.51*** (0.11)		0.31* (0.14)		0.44*** (0.11)		0.20 (0.19)	0.56*** (0.10)
Region dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number	146	146	146	146	146	146	146	146	146	146	146	146	146
Adjusted R-squared	0.579	0.695	0.627	0.696	0.637	0.697	0.697	0.710	0.658	0.715	0.706	0.707	0.697

Note: Robust standard errors in parentheses, * p<0.10, * p<0.05, ** p<0.01, *** p<0.001.
Source: Wang 2020.

The rise of the wellness economy can support small and female-operated businesses in the region, as many wellness segments are service-oriented and dominated by locally owned enterprises. Such businesses typically include those providing lodging and tour guide services, restaurants, retail shops, spas, yoga studios, and makers of local products and crafts. Wellness consumers increasingly favor organic, locally sourced, and sustainable products, as well as experiences that are authentic and come with unique and compelling stories. Consumers are often willing to pay a premium for these offerings, which can include local and traditional culinary experiences, healing modalities, herbal and traditional remedies, natural skincare and personal care products, native textiles, crafts, and the performing arts. Rising demand for these types of wellness products helps stimulate entrepreneurship and encourages micro and small enterprises, helping them to leverage local heritage and make good use of indigenous materials to create products and experiences that can further attract wellness consumers.

Small businesses can play a critical role in promoting physical activity in their own communities. Many of today's big branded and franchised fitness chains started out as small, independent studios. Small gyms and yoga and dance studios can be launched with relatively modest investments and be viable while still small, which means they can be tailored to local needs and price points. Whereas large, multinational branded chains tend to cluster in first-tier and higher-density urban areas, independent entrepreneurs—many of whom began as instructors or personal trainers—often launch new businesses in their own communities. Indeed, small business dominates the fitness industry in lower-income countries, second-tier cities in middle-income countries, and suburban and lower-density areas in higher-income countries. Beyond fitness, independent, unbranded businesses and local proprietors are especially dominant in industry segments such as yoga and Pilates studios, martial arts centers, dance studios, and local sports leagues and clubs.

Most wellness consumers are women, and many wellness-related occupations are traditionally female-dominated: massage therapist, complementary medicine practitioner, traditional healer, and tourism and retail worker. Growth in the wellness industry thus supports job creation for women across Asia. The Global Wellness Institute estimates that spa facilities employed more than 900,000 people in Asia and the Pacific in 2017, including over 500,000 spa therapists and 90,000 spa managers and directors, most of them women (Yeung and Johnston 2020d). Spa employment is projected to increase to 1.2 million in 2022, which means the region will need an additional 160,000 trained therapists and 30,000 experienced managers and directors in the spa industry alone within the next several years. Female workers will benefit from this growth.

Looking more specifically at employment in Asia, women are the majority in occupational categories related to personal services and personal care across a number of countries: 73% in the Lao People's Democratic Republic, 84% in Mongolia, 53% in Myanmar, 57% in the Philippines, and 69% in Thailand. In these same countries, women fill only 38%–47% of jobs across all occupations (Yeung and Johnston 2020d).[9]

Moreover, traditional wellness knowledge of, for instance, healing modalities and herbal remedies, is often transmitted matrilineally, passing from grandmother to mother to daughter. The rise of the wellness industry creates economic and entrepreneurship opportunities for women in many communities at all income levels while strengthening the preservation of cultural heritage and indigenous knowledge.

However, an ongoing challenge arises from the perception that many wellness jobs require mainly skills traditionally considered to be female: hands-on caring, healing, serving, food production, gardening, and craft making. Consequently, many occupations in the wellness industry remain undervalued in society, paying wages below average. Worse, wellness occupations sometimes face stigma, such as when the public conflates massage therapists with sex workers, discouraging women from pursuing careers in these fields. The dominance of female workers in the wellness industry may also worsen the risk of worker exploitation and abuse. Governments that seek to promote and support the development of the wellness industry therefore need to be mindful of the role, condition, and needs of female workers in it.

6 Policies for physical and mental wellness

Government policies to promote wellness benefit individuals, the economy, and society at large. Wellness makes people happier and more productive, and wellness industries are a growing part of the economy. Yet wellness is poorly understood by governments, which have not incorporated it into policy making as an overarching framework or explicit priority. Nevertheless, wellness brings an important perspective to policy making that is complementary to public health, health policy, and the emerging field of happiness.

Wellness-related policies must be geared toward improving the health and well-being of the whole population. This naturally highlights the role of public investment in projects geared toward improving physical and mental health, which benefit everyone. Landscaping and maintaining a green public park in a crowded city, for example, provide a place of rest and relaxation for all the city's residents.

Further, government intervention can especially benefit poorer Asians, who are often disadvantaged in access to wellness facilities. In contrast with richer Asians, who can and do spend their own money on wellness activities, poorer Asians get most of their physical exercise and other wellness activities at free facilities such as neighborhood parks or basketball courts. Asian governments would thus do well to pay special attention to the needs of the poor by investing in sports and physical recreation infrastructure, facilities, and programs, for example, and in other activities that the public can access at very little or no cost.

Wellness policies are measures that nudge people to proactively make healthy choices and live healthy lifestyles, as well as create living environments that support and encourage healthy behavior and lifestyles. These policies ideally run through four cross-cutting domains and follow a lifespan approach, as explained in the next two sections.

6.1 Four cross-cutting wellness policy domains

Wellness policies generally cover four cross-cutting policy domains. First, Asian governments can adopt measures geared to help create a healthy built environment, such as by prioritizing walkability and physical movement in urban and regional planning. Second, they can enable and

support physical activity by funding public infrastructure, facilities, and programs for recreational physical activities. Third, policy makers can encourage healthy eating by improving consumer awareness of nutrition and diet. Finally, they can enhance wellness in the workplace by ensuring a safe and healthy physical work environment. Taken together, policies from the four cross-cutting domains can promote the mental and physical wellness of Asians.

Creating a healthy built environment

The modern-day built environment—both urban and suburban—is often described as obesogenic, with many factors interacting and conspiring against a physically active lifestyle and encouraging sedentary behavior. The built environment also influences social interactions, mental wellness, and even levels of civic engagement.

Several policy areas offer opportunities to counter and reverse the unwellness that is embedded in many of today's living environments. Policy interventions on infrastructure and the built environment can have some of the widest-ranging impacts because they affect the entire population of a neighborhood or community. They also provide opportunities to target disadvantaged or marginalized neighborhoods and population groups.

Four specific priority areas for creating a healthy built environment are to (i) prioritize walkability and physical movement in urban and regional planning, (ii) create green spaces and natural sanctuaries for urban residents, (iii) protect people from harmful indoor environments and materials, and (iv) support wellness real estate and make healthy homes affordable and accessible. Table 6.1 shows sample policies specifically to prioritize walkability and physical movement.

Two other aspects of the living environment also have important impacts on population health and well-being:

(i) **Modern sanitation.** Globally, 2 billion people lack access to basic sanitation services (WHO 2019). Investment in sanitation infrastructure such as modern toilets, sewage systems, and wastewater treatment plants directly improves health in underdeveloped communities around the world.

(ii) **Pollution and environment.** Pollution of the air, water, and soil has a large and growing impact on human health. Environmental policies that reduce pollution offer direct benefits for people's physical and mental well-being.

Table 6.1 Creating a healthy built environment by prioritizing walkability and physical movement in urban and regional planning

Planning and prioritization	• Craft active transit (by muscle power) and public transport master plans that proactively address how a neighborhood, city, or region will deploy resources to prioritize walkability and bikeability in all infrastructure projects.
Public investment	A. Plan, design, and invest in infrastructure that emphasize walkability and bikeability: 1. **Complete streets.** Ensure that street infrastructure enables safe, convenient, comfortable walking, biking, and public transport, as well as personal vehicle use, with wide sidewalks, accessible crosswalks, pedestrian signals, separated bike lanes, special bus lanes, median refuge islands, curb extensions, and narrow vehicle lanes. 2. **Connectivity.** Remember that walkability is affected by connectivity in streets, grid networks, and block length, as well as by how pedestrian and biking infrastructure connect to each other and to public transport, workplaces, parks, and other key destinations. 3. **Streetscape design.** Design and place amenities like trees, street lighting, benches, wayfinding signage, public art, street-level storefronts, and bike parking to promote walking and improve real and perceived safety. 4. **Public investment in multi-use trails.** 5. **Public support or funding for bike-sharing programs.** 6. **Parking design and policies.** Remember that the quality, quantity, and location of parking can affect walkability. 7. **Traffic calming.** Adopt slower speed limits on selected thoroughfares for pedestrians and cyclists. B. Prioritize and fund infrastructure and building projects located near public transport and walking and cycling routes. C. Invest in public transport that encourages active transit, because most such trips begin and end with walking or cycling.
Regulation	A. Ensure that zoning, building codes, and land-use regulations encourage high density and mixed-use development because they encourage walking and biking by allowing people to live closer to work and commercial areas. B. Designate car-free zones, especially in city centers. C. Use congestion pricing to reduce traffic.
Tax and fiscal incentives	A. Offer incentives to people who commute by active transit or public transport. B. Reward developers that include walkability and bikeability in their projects.

Source: Johnston, Yeung, and Bodeker 2020.

Supporting physical activity

Physical activity is essential to good health, yet over 27% of adults worldwide do not get enough of it. As shown in section 3 above, rates of inactivity vary across developing Asia, from over one-third of the population currently inactive in India, Pakistan, the Philippines, the Republic of Korea, and Singapore to only 15%–16% in most of East Asia and the Pacific. People can be physically active through natural movement—for transportation, work, or domestic chores—or through recreational activities in leisure time. As natural movement is on the decline around the world, increasingly discouraged by our modern lifestyles and built environments, recreational physical activities are becoming more essential for people to stay healthy.

When people in Asia are asked why they do not participate in recreational physical activity, the most often cited reasons are lack of time, energy, or interest or else physical or health impairment. For children, the most important barriers are lack of time, interest, or access to facilities (GWI 2019). Governments can play an important role in enabling, encouraging, and widening participation in recreational physical activity through four broad priorities: (i) invest in public infrastructure and facilities, (ii) prioritize government investments in disadvantaged areas

and target groups at risk, (iii) engage the medical community to prescribe exercise, and (iv) help children and youth to build lifelong healthy habits through school and youth sports. Government initiatives that prioritize walkability and active transit in the built environment, as elaborated in the previous section, are also critical for encouraging more physical activity in natural movement.

Encouraging healthy eating

Developing Asia has experienced a major nutrition transition over the past few decades, shifting from food insufficiency and undernutrition to a rise in poor eating patterns and overconsumption of unhealthy foods, notably the increased consumption of foods that are overly processed, prepared outside the home, and from animal sources; larger portion sizes; and higher use of oils and sweeteners. The spread of modern, industrialized farming and of commercial food production, marketing, and distribution—often supported and encouraged by government policy—is linked to the spread of unhealthy, nutrition-poor, highly processed Western diets across Asia. These unhealthy eating patterns contribute to the rise of obesity and chronic disease in Asia and worldwide. A study of the global burden of disease found poor diet to be a factor in one out of five deaths around the world (Lancet 2019).

Today's health and wellness challenges related to food and nutrition encompass a host of concerns, from poor nutrition, processed foods, and obesity to food insecurity, food equity, food safety, and so-called urban food deserts, where access to affordable and nutritious food is limited. While individuals are responsible for the foods they purchase and consume, poor choices are encouraged and facilitated by unhealthy food environments, unhealthy ingredients and additives, easy and cheap access to nutritionally poor meals, and a lack of awareness about healthy food groups. Government policies have a major influence on all these factors, which means that they can promote healthy eating (Mozaffarian et al. 2018, Institute of Medicine and National Research Council 2009, Gorski and Roberto 2015).

The five specific priority areas for encouraging healthy eating are (i) improving consumer awareness of nutrition and diet, (ii) creating economic incentives for healthy eating choices, (iii) creating healthier food environments and expanding access for high-risk groups, (iv) strengthening industry standards and regulations on ingredients and marketing, and (v) treating food as good medicine in patient care. Table 6.2 shows sample policies specifically to improve consumer awareness of healthy diets.

Table 6.2 Encouraging healthy eating by improving consumer awareness of nutrition and diet

Public awareness and education	A. Establish national dietary guidelines and ensure that they are up to date, reflect the latest scientific evidence on healthy eating, and are culturally sensitive and adaptable. B. Conduct public awareness and educational campaigns on nutritional guidelines and healthy eating practices, especially targeting children, the disadvantaged, and other populations at risk. C. Add food and nutrition education to the public school curricula, along with cooking skills. D. Develop community-based cooking and nutrition programs, especially targeting populations and communities at high risk.
Regulation	A. Establish food labeling standards and guidelines for packaged foods and beverages, either mandatory or voluntary, that include: 1. clear and consistent labeling of ingredients, additives, sizes, nutrition, and recommended daily intake; 2. front-of-package labels, warnings, symbols, or color-coding to alert consumers to unhealthy ingredients or additives, or to highlight healthy choices; 3. regulated usage of labels or claims on food packaging, such as "healthy," "natural," "low fat," "low sugar," to ensure that they are used consistently and do not make false claims. B. Establish labeling standards and guidelines for restaurant menus, either mandatory or voluntary, that provide, for example, calorie information, and develop special labels for healthier options.

Source: Johnston, Yeung, and Bodeker 2020.

Enhancing wellness in the workplace

Workers in Asia are plagued by unwellness: rising chronic disease; workplace illness, injuries, and death; financial insecurity; rampant stress and burnout; and widespread employee disengagement. Some of these issues are closely intertwined with globalization, technological change, new business models, and shifting relationships between workers and employers as the economy evolves, in particular with the rise in the gig economy of short-term contract work. Within this evolving landscape, governments can help to protect and enhance workers' well-being through policies and regulation, as well as by leading and promoting best practices as an employer of a large government workforce.

Five broad policy priorities for enhancing wellness in the workplace are to (i) ensure a safe and healthy physical work environment; (ii) protect workers from hostile work environments, overwork, and other triggers of emotional and mental distress; (iii) provide living wages, unemployment benefits, and paid family and sick leave; (iv) make government a leader and best-practice employer in terms of workplace wellness; and (v) establish legal structures that enable and support community-enhancing "benefit corporations" and environmental, social, and governance reporting. In sum, government policy should protect workers from physical and mental harm, encourage employers to create a work environment that is conducive to wellness, and promote better work–life balance for all workers.

6.2 A lifespan approach to wellness policy making

Healthy aging needs to begin in childhood, within an overarching lifespan framework such as Japan's 100-Year Life Program (Box 6.1). Preventive interventions in the first 1,000 days of life can have lifelong effects, requiring support from appropriate policies. Authorities should start in the early years and consider incorporating wellness as part of the formal education system, from school curricula to the learning and social environment for students. Further along the lifespan, a range of policies can support healthy aging: lifelong learning, reskilling, personal growth and transformation, and, for seniors, safe and wellness-enabling homes and appropriate nutrition.

Box 6.1 Japan's 100-Year Life Program

Between a "healthy lifespan" and an "average lifespan" in Japan is a gap of about 10 years—a decade of poor health. The healthy lifespan for men rose from 71.19 years in 2013 to 72.14 years in 2016 and for women from 74.21 to 74.79 years, as estimated by the Ministry of Health in March 2018. Meanwhile, the average lifespan for Japanese men lengthened from 80.21 years in 2013 to 80.98 years in 2016, and for Japanese women from 86.61 to 87.14 years. Thus, because of lengthening healthy lifespans, life expectancy after one's healthy years shortened by 0.18 years for men and by 0.05 years for women.

Japanese spend most of their lifelong medical expenses in the 10-year period after the end of their healthy lifespan. This places considerable strain and—despite a slightly shortening gap—a growing burden on the health-care system and the national budget, especially as average lifespan increases in Japan (Maruyama forthcoming).

To address this challenge, Japan has introduced its 100-Year Life Program, which aims to promote wellness and a healthy long life. Traditionally, planners have considered life in three stages: education, employment, and retirement. The program aims to shift the paradigm toward a multistage life, with support provided at every stage. The new approach allows individuals to acquire new skills and knowledge to help them as they progress through their envisioned century-long lifespan.

Japan established the Council for Designing 100-Year Life Society to formulate a grand policy framework for the government to implement. The goals of the council are to significantly improve pay for long-term care workers, dramatically expand recurrent education to enhance mid-career employment prospects, and lay the groundwork for raising elderly employment rates.

Council priorities are to ensure that educational opportunities are open to all people, reduce the cost burden of education, and promote education for adults who want to resume learning regardless of their age. Higher education must be reformed to this end, as the conventional liberal arts courses for young students that are currently offered at universities may not be sufficient to meet the needs of the whole of Japanese society.

Another council priority is to loosen and diversify corporate hiring practices beyond the current practice of hiring new graduates just once a year, by introducing various employment formats for the elderly. Such changes are considered key to securing capable human resources, as companies cannot secure the necessary talent simply by employing new graduates in one sweep.

Finally, the council prioritizes reforming the current social security system, which emphasizes benefits for the elderly based on the three traditional life stages: youth and students, adults and workers, and the retired elderly. The existing elderly-centered system must eventually morph into a social security system that benefits all cohorts of the population equally.

Reference:

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Source: Johnston, K., O. Yeung, and G. Bodeker. 2020. *Policy Options to Promote Wellness in Asia*. ADB.

An adaptive lifetime framework for wellness policy would clearly be optimal, as individuals face different wellness needs at different stages in their lives. The World Health Organization takes a lifespan approach to understanding the risk factors and determinants of mental health, explicitly recognizing that mental health priorities depend on age.

Along with the crosscutting wellness policies discussed above, lifelong wellness measures can help Asians navigate the uncertain, stressful COVID-19 world toward a better new normal after COVID-19. COVID-19 is a wake-up call to the world to place a higher priority on wellness. The current pandemic is a startling global health and economic crisis that has spread a great deal of fear and anxiety everywhere. Never before have health and well-being declined so rapidly and synchronously for so many people around the world. Pursuing universal health care and strengthening primary health care would amplify the benefits of wellness for all Asians.

Wellness is never more important than in difficult times like these. Families and friends, communities, businesses, and governments all shape people's lives and determine whether they have access to wellness. Some of the suffering from COVID-19 can be lessened if societies are able to strengthen their wellness foundations. These difficult times show where future priorities belong, and where wellness can offer a roadmap for healing and growth.

Endnotes

1 The study included data on physical activity across four key domains—for work, in the household (paid or unpaid), for transport to get to and from places on foot or by bicycle, and leisure time sports and active recreation. The data were collected through random sampling with sample sizes of at least 200 representative of a national or defined subnational population (Guthold et al. 2018).

2 For developing Asia, covering 42 member economies of the Asian Development Bank (ADB), the total physical activity economy is estimated at $177.7 billion, with expenditure per participant estimated at $138.26.

3 Average participation rate for developing Asia covering 42 developing member economies of ADB is 31.6%.

4 A culture of overwork and burnout seems to be particularly rampant in East Asia. Death by overwork is definitely a thing in East Asia, called *karoshi* in Japan, *guolaosi* in the PRC, and *gwarosa* in the ROK. A 2016 Japanese paper on *karoshi* found that working more than 60 hours per week significantly increased the risk of *karoshi* in males, while the threshold for females was about 45 hours. Because Japanese women tend to bear more of the home burden, adding housework to overly long work hours imposes on women a serious risk of *karoshi*.

5 Data on the wellness real estate market presented here encompass both residential projects, referred to as wellness lifestyle real estate, and commercial and institutional projects (office, hospitality, mixed- or multi-family, medical, and leisure developments) that have wellness components. As it is impossible to separate out the residential and nonresidential components in commercial and institutional projects, the Global Wellness Institute estimates wellness real estate in aggregate.

6 Because it is the typical caloric intake for an adult male, 2,500 calories is generally used to approximate aggregate calorie sufficiency with respect to national food availability. Food availability data indicate food supply but may underestimate the availability of processed food, particularly imported processed food, which contributes significantly to fat, salt, and sugar intake. Conversely, availability is likely to be higher than actual consumption considering loss and wastage at the point of consumption. Generally, food balance sheets are constructed for products derived from primary crops up to the first stage of processing and to the second or third stage for livestock and fish products. http://www.fao.org/economic/ess/fbs/ess-fbs02/en/ (accessed 6 April 2020).

7 In the United Kingdom, the prevalence of clinically significant mental distress rose from 18.9% of the population in 2018–2019 to 27.3% in April 2020, which was 1 month into

the lockdown there (Pierce 2020). In the US, an April 2020 poll conducted by KFF found 45% of adults reporting that their mental health had been compromised by worry and stress over the virus; a similar poll in 2018 found 32.5% of adults reporting that they felt worried, nervous, or anxious either daily, weekly, or monthly (Panchal et al. 2020). In the PRC, a survey in late February and March 2020 revealed 27.9% of respondents reporting depression, 31.6% anxiety, 29.2% insomnia, and 24.4% acute stress (Shi et al. 2020). The prevalence of these mental health symptoms during the pandemic was higher than before the outbreak, when rates of moderate-to-severe depression were 6.0%, moderate-to-severe anxiety 5.3%, and insomnia 15.0%.

8 National averages of happiness were obtained from chapter 2 of the *World Happiness Report 2019*, which is based mainly on the Gallup surveys from 2016 to 2018 (Helliwell et al. 2019).

9 These figures are estimates by the authors, combining two ISCO-08 occupational categories: *51-Personal service workers* (including travel guides, cooks, waiters, hairdressers, beauticians, housekeeping supervisors, etc.) and *53-Personal care workers* (including personal care workers in health services, and childcare workers and teachers' aides). Data are for 2017 and 2018.

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Asian Development Outlook 2020 Update

Wellness in Worrying Times

Developing Asia has suffered as the COVID-19 pandemic persists. Growth, trade, and tourism collapsed in 2020, leading to the region's first economic contraction in nearly 6 decades. Governments across Asia acted quickly to contain the virus and its economic effects, and signs of bottoming out have now appeared. Inflation remains benign, constrained by depressed demand and declining food prices.

A prolonged pandemic is the primary downside risk to the outlook. Persistent or renewed outbreaks and a return to stringent containment could possibly derail the recovery and trigger financial turmoil. Recovery depends on measures to address the health crisis and on continued policy support.

The pandemic has highlighted the importance of wellness, both physical and mental. Wellness—the pursuit of holistic health and well-being—is a component of the UN's Sustainable Development Goals. This report evaluates the state of wellness in Asia, documents how the wellness economy is a large and growing part of the region's economy, and discusses how policy makers can promote wellness by creating healthy living environments, encouraging physical activity and healthy diets, and enhancing workplace wellness.

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members —49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

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