

# The Hoover Institution's **Survey of India**

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Huntington Program on Strengthening US-India Relations



## 5. Health and Education Outcomes in India

### *A Half Century of Progress and Shortcomings*

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India has made remarkable progress in the twenty-first century as it works toward advancing its education and health outcomes. Since Indian Independence in 1947, life expectancy has more than doubled, going from less than forty years in 1947 to over seventy in 2024.<sup>1</sup> Fewer children are dying before their fifth birthday; women are having fewer children, and when they do, they are more likely to survive childbirth; vaccines are more widely available; and death rates from communicable diseases continue to decline. India's healthcare infrastructure and access to modern medicine have vastly expanded. Diseases that once debilitated much of the population, like polio, have all but been eradicated. The life of an Indian citizen in the twenty-first century is remarkably better than even twenty years prior.

India's literacy and education rates have also seen substantial improvements since Independence. At that time, only 12 to 18 percent of the population was literate, and it closely coincided with socioeconomic status. Since then, the state and national governments have undertaken several initiatives to expand educational access. As of the 2011 census, the literacy rate had increased to 74.04 percent, and the latest estimates indicate

that the literacy rate was near 77 percent in 2023.<sup>2</sup> Although this is a clear improvement, India's literacy rate remains below the global average of 87 percent.<sup>3</sup> China, for example, had a similar literacy rate in 1947 but now has a literacy near 100 percent.<sup>4</sup> There are also notable gaps along lines of gender, caste, urban-rural residency, and socioeconomic status. Estimates in 2018 found that 84.7 percent of men in India are literate compared with only 70.3 percent for women.<sup>5</sup> A rural woman in India has a literacy rate of around 65 percent compared with an urban woman at 83 percent. These divides are also regionally concentrated. For example, more than 90 percent of women in rural areas of Kerala are literate compared with 49 percent of rural women in Bihar.<sup>6</sup>

Despite significant overall progress, discrepancies and inequalities remain obvious, as marginalized groups continue to have among the worst health and educational outcomes. The negative impacts of caste continue to shape access, opportunities, and outcomes especially in rural areas. The quality of life also varies significantly based on region. Residents of states like Uttar Pradesh and Bihar live shorter lives with fewer opportunities whereas citizens of states

like Kerala have life expectancy and literacy rates similar to those of developed countries.

Critics have also raised concerns about the potentially growing influence of Hindu nationalist ideology, or “saffronization,” in health and education policies. Changes in the curriculum that removed or modified historical texts and narratives about India’s history, an increased focus on Sanskrit and Hindi, and the appointment of Bharatiya Janata Party (BJP) supporters to high-ranking university administrative positions are among some examples of changes that have furthered these concerns. Ultimately, saffronization of these previously neutral fields could further marginalize religious minority groups and heighten communal tension.

This chapter examines the current state of health and education in India. Focus is given to the progress that has been made since Independence and particularly in the last twenty-five years. Subsequent sections will examine new policies and priorities undertaken by the Modi government since 2014 and the success and continuing challenges facing India in these sectors.

## BACKGROUND

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At the turn of the twenty-first century, India sought to establish itself as a major economic and political power. Following major economic liberalization policies in the 1990s, India began experiencing rapid economic growth; GDP growth averaged between 7 and 9 percent in the early 2000s and 6 and 7 percent in the 2010s.<sup>7</sup> The liberalization measures introduced in 1991 aimed to open the Indian economy, reduce trade barriers, and integrate India into the global economy. As India’s economy opened to global trade and investment, the government saw this as an opportunity for economic growth to drive social development. Although the primary objectives were economic in nature, such as boosting growth, attracting foreign investment, and improving

competitiveness, the government also recognized the potential social benefits of trade liberalization through job creation, access to goods and services, and technological innovation. Economic growth through expanding employment opportunities was expected to contribute to poverty alleviation and improved quality of life.

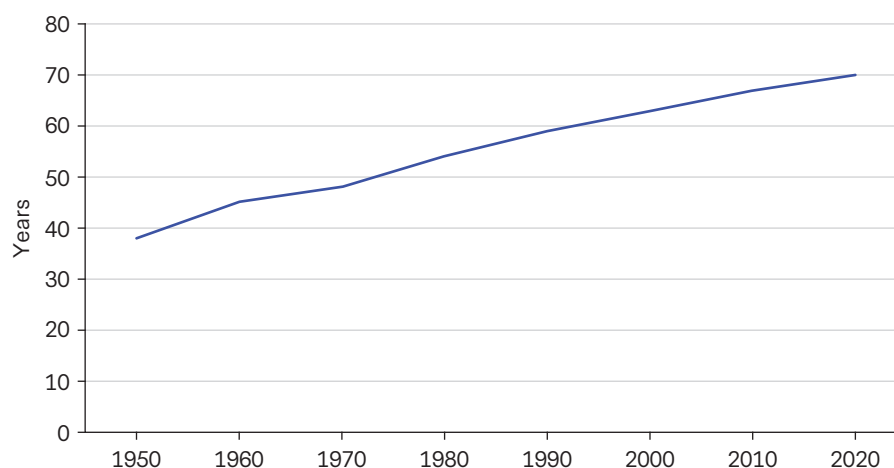
India’s trade liberalization policies coincided with the United Nations Millennium Development Goals (MDGs). The MDGs were established in 2000 and highlighted eight development goals for member states to achieve by 2015. The goals aimed to address various global challenges and improve the living conditions of people around the world. India expressed strong support for the MDGs and actively participated in the global efforts to achieve these targets. The government identified areas such as education, healthcare, sanitation, and gender equality as critical for achieving the MDGs. India made significant progress in areas such as reducing poverty, improving access to education, and combating diseases like HIV/AIDS and malaria. However, it also faced obstacles such as regional disparities and gaps in health-care and sanitation provisions.

## THE STATE OF HEALTHCARE

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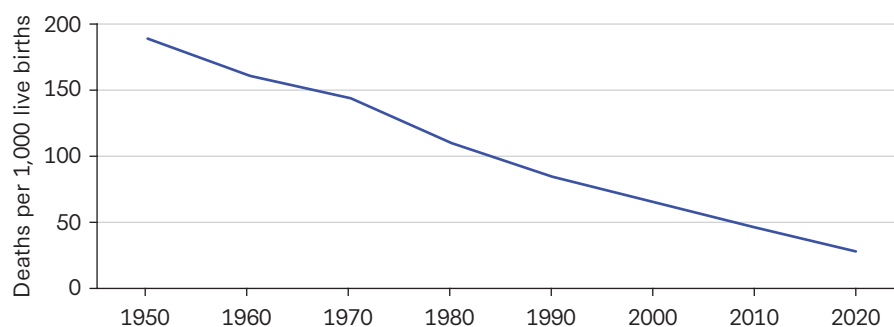
India has made significant strides in improving public health since Independence. Infant mortality rates dropped from over 160 per 1,000 births in 1960 to 26 per 1,000 births in 2022.<sup>8</sup> Likewise, maternal mortality dropped from 680 per 100,000 live births in 1980 to nearly 100 per 100,000 in 2020.<sup>9</sup> Other important indicators also saw significant improvement. Mortality and frequency rates of communicable diseases like tuberculosis and HIV/AIDS have also been significantly reduced.<sup>10</sup> Smallpox was eradicated in 1977 and polio in 2014.<sup>11</sup> These were significant milestones that helped improve the quality and duration of life for many Indian citizens. These improvements are a result of decades of cumulative efforts to improve

**FIGURE 5.1** Life expectancy



**Source:** World Bank's World Development Indicators

**FIGURE 5.2** Infant mortality



**Source:** World Bank's World Development Indicators

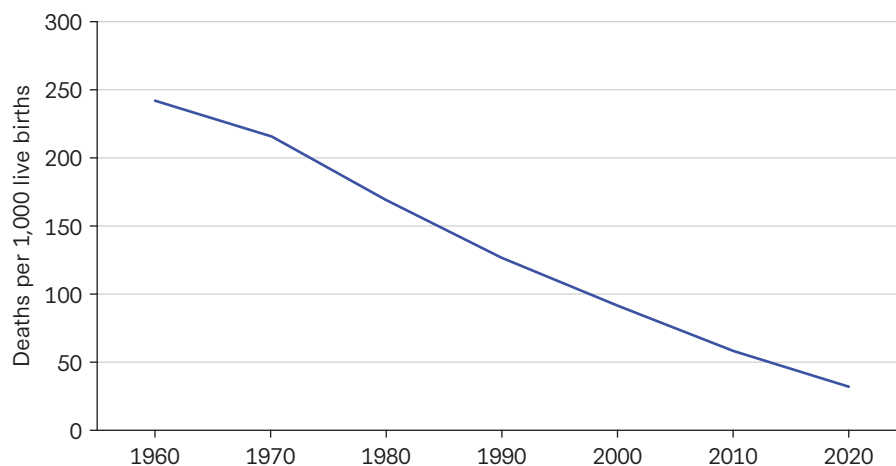
the life expectancy of Indians, which has gone from thirty-five years in 1950 to seventy-plus years in 2024 (see fig. 5.1).<sup>12</sup>

Several factors are responsible for this notable increase in India's life expectancy. Not only are people living longer lives in general, fewer infants, children, and mothers are dying (see figs. 5.2, 5.3, and 5.4). Lowering infant and child mortality has been done through a multipronged approach over several decades. In the 1970s, programs like the Integrated Child Development Services (ICDS) focused on improving nutritional status for children under six by providing access to food, healthcare, and education to the mother and children.<sup>13</sup> Although infant and child mortality rates

were reduced, they still remained high. By 2000, the infant mortality rate in India was 66 deaths per 1,000 live births, lower but still comparatively high.<sup>14</sup> For example, China's infant mortality rate was 30 deaths per 1,000 and Sri Lanka's was 14.8 at the same time.<sup>15</sup> India still had many factors that urgently needed to be addressed to reduce infant mortality.

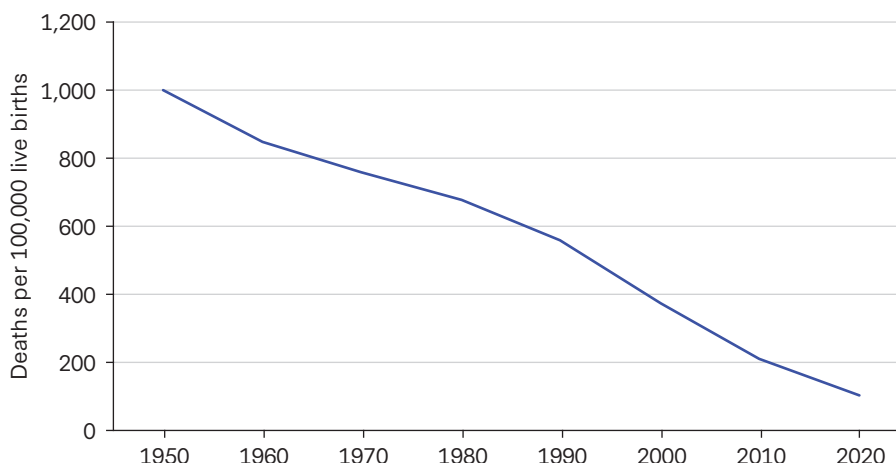
The government of India launched a series of programs focused on improving maternal and infant health in the twenty-first century. In 2005, the government launched two new programs, the National Rural Health Mission/National Urban Health Mission (NRHM/NUHM) and Janani Suraksha Yojana (JSY).<sup>16</sup> These programs focused

**FIGURE 5.3** Mortality rate, children under 5



**Source:** World Bank's World Development Indicators

**FIGURE 5.4** Maternal mortality rate



**Source:** UNICEF, "Maternal Mortality," data for India

on increasing the number of attended births taking place in healthcare facilities. Such access would reduce the risk of birth-related complications that require immediate attention, such as hemorrhage, sepsis, neonatal infections, and birth asphyxia. Having access to a facility that can provide emergency C-sections can drastically improve the outcomes for both mother and baby. Following the introduction of these two programs, institutional deliveries increased by 42.6 percent, bringing specific improvement to

rural communities and those of the lower socioeconomic strata.<sup>17</sup> The programs also helped expand access to contraception and provide breast-feeding assistance.

Both mother and baby are at increased risk of complications when births are less than eighteen months apart. Thus, access to contraception was critical to reducing the frequency of pregnancy and increasing the duration between pregnancies, improving overall health outcomes. These initiatives

helped reduce India's infant mortality to fewer than 30 per 1,000 live births in 2020 (see fig. 5.2).<sup>18</sup>

At the heart of addressing high maternal and infant mortality was reducing the fertility rate. A reduced fertility rate leads to better health outcomes for the mother and her children by reducing pregnancy and childbirth complications, allowing extended time for breast-feeding, reducing the amount of money and food a family needs to survive, and improving the quality of education and healthcare available to children.

India became the world's most populous country in April 2023 with 1.4 billion citizens.<sup>19</sup> Despite this new placement, India's fertility rate has continued to decline. At Independence, India's fertility rate was 6.0, meaning the average woman had six children in her lifetime.<sup>20</sup> Because such a high birthrate was unsustainable, the Indian government initiated several initiatives early on, beginning with the National Family Planning Program (NFP) in 1952.<sup>21</sup> The program sought to make birth control widely available to the population by free distribution of contraceptives in addition to education campaigns related to family planning. Sterilization was also promoted as a popular and permanent fix for women who no longer wished to have children.

By 2000, the fertility rate had been cut nearly in half, and the average woman was delivering 3.35 children in her lifetime.<sup>22</sup> Several programs expanded on the original NFP to help reduce pregnancies, including the Reproductive and Child Health (RCH) Program in 1997 and the National Population Policy in 2000, which sought to stabilize India's population by 2045 by achieving a replacement-level fertility rate (two children per woman).<sup>23</sup> This was addressed by promoting delayed marriage and childbearing, increasing access to contraception, and highlighting the long-term benefits of increased spacing between births.<sup>24</sup> These programs helped reduce the fertility rate even further; however, there was still a regional and urban/rural divide. To help address

the high birthrates in certain districts, Mission Parivar Vikas was launched in 2016. The program sought to make contraception more widely available, including insertion of IUDs during postpartum care.<sup>25</sup> Overall, these programs have been quite successful and have significantly contributed to the reduction in fertility rates. As of 2021, the fertility rate is at two children per woman and thus close to stabilizing population growth.<sup>26</sup>

## CHILDHOOD VACCINES AND NUTRITION

Vaccine access expansion programs were another key factor in reducing infant and child mortality rates. The Universal Immunization Program introduced in 1985 increased vaccine coverage in children, especially for polio, but the overall vaccination rates remained low. Less than half of children were being fully immunized by 2000.<sup>27</sup> To be considered fully immunized, a child should receive four doses of the tuberculosis vaccine (BCG), three doses of the diphtheria, tetanus, and pertussis vaccine (DTP), three doses of the polio vaccine, and one dose of the measles vaccine by twelve months. In 1993, only 44 percent of children were fully immunized, and by 2015 that number was higher but still too low at 62 percent.<sup>28</sup>

To address poor vaccine coverage, in 2014 the Union Health minister introduced Mission Indradhanush, which sought to achieve 90 percent of full immunization coverage by 2022.<sup>29</sup> The government was specifically focused on six hundred districts with low vaccination rates. Although vaccine coverage was improving, it was not on the trajectory to meet the 2022 goal of 90 percent. Thus in 2017 the Intensified Mission Indradhanush (IMI) was introduced under the Modi government.<sup>30</sup> However, full vaccination coverage still fell below 90 percent, and four hundred thousand Indian children were dying yearly from vaccine-preventable diseases. The coronavirus pandemic further impacted these rates and led to a 6 percent drop in childhood vaccines in 2020.<sup>31</sup>



This led to the introduction of the Intensified Mission Indradhanush 4.0 in 2022.<sup>32</sup> A World Health Organization report found that 90 percent of children under two had received DPT3 coverage (diphtheria, tetanus, pertussis), but full vaccination coverage was lower. According to the National Family Health Survey 5 (NFHS-5) conducted in 2019–21, approximately 76 percent of children are fully immunized compared to 62 percent in 2015–16. A notable improvement but still much lower than the goal of 90 percent.<sup>33</sup>

However, vaccinations alone are not enough to drastically improve infant, child, and maternal health outcomes. In addition to addressing vaccination rates and attended birth, improvement in nutrition rates has been key. Much of the population suffers from poor health outcomes related to anemia, malnutrition, and undernutrition. These conditions not only stunt growth but make pregnancy, childbirth, and infancy much riskier. In 2023, the Global Hunger Index (GHI) found that India ranks 111th out of 125, with a designation of “serious” levels of hunger.<sup>34</sup> This is an improvement from previous designations by the GHI of “alarming” rates of hunger in 2000 and 2008; however, such a poor ranking is obviously concerning. Nearly all countries with scores worse than India’s were active war zones, highlighting India’s major challenges when it comes to adequate nutrition.

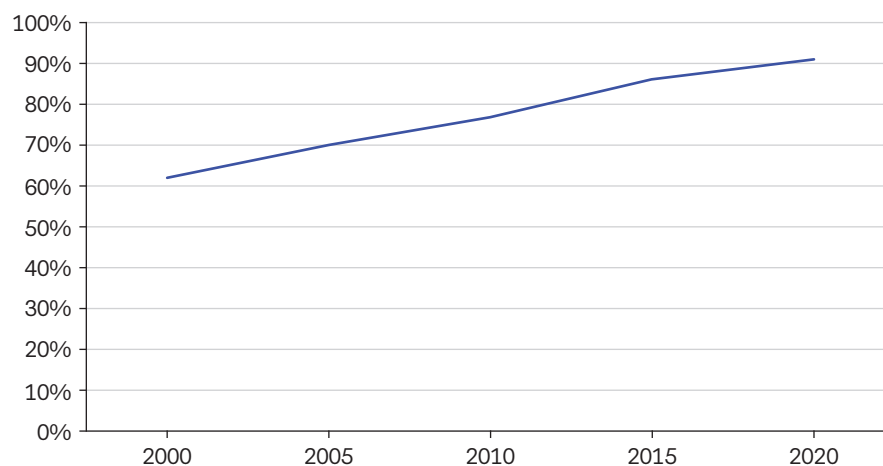
India has undertaken several programs to address chronic hunger and malnutrition. At the forefront of this was ensuring access to safe, nutritious, and healthy foods. The Food Safety and Standards Authority of India (FSSAI), established in 2008, was at the forefront of addressing food and nutrition safety and concerns.<sup>35</sup> The FSSAI was specifically focused on fortification of food staples. In 2016, the FSSAI launched the Food Fortification Resource Centre (FFRC) to promote and support food fortification initiatives across the country.<sup>36</sup> In 2019, the Ministry of Consumer Affairs, Food and Public Distribution collaborated with the FSSAI and scaled up efforts to distribute fortified rice

through the public delivery system, particularly targeting states with high malnutrition rates.<sup>37</sup> The midday meal scheme also sought to address malnutrition/undernutrition by providing hot meals during school.

In 2018, the government launched a National Nutrition Mission (NNM or POSHAN Abhiyaan) focused on improving the nutritional status of those most at risk for anemia, children under six, adolescent girls, and pregnant/lactating women.<sup>38</sup> The government invested 54 million Indian rupees (INR) into the scheme; however, outcomes were poorer than expected. Rates of wasting only reduced from 21 to 19.3 percent, undernutrition rates only slightly fell from 35.7 to 32.1 percent, and stunting reduced from 38.4 to 35.5 percent.<sup>39</sup> In 2023, it was announced that the NNM would be realigned as part of Mission Saksham Anganwadi and POSHAN 2.0. The program seeks to expand diet diversity and food fortification, increase use of millets and ultimately reduce anemia and malnutrition/undernutrition, and improve nutrition.<sup>40</sup>

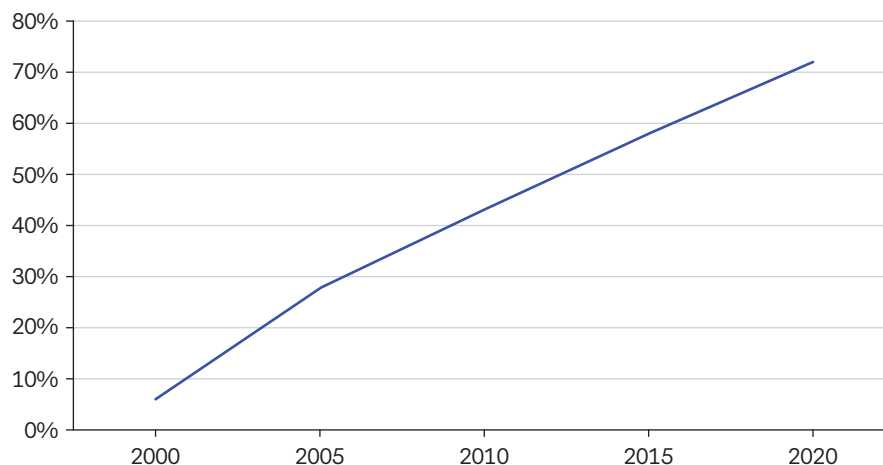
The Pradhan Mantri Matru Vandana Yojana (PMMVY) was a program launched by the Modi government in 2017 to give cash incentives to pregnant and lactating women to improve their health status. Women in the program received 5,000 INR (~US\$60) in three installments when they registered their pregnancy with a birth facility, received antenatal checkups, and registered their childbirth.<sup>41</sup> Likewise, the 2018 Anaemia Mukh Bharat (Anemia-Free India) program sought to address high anemia rates in children and pregnant or lactating women. Since anemic women are at higher risk of pregnancy and delivery complications, addressing anemia in pregnant women was key to achieving improved health outcomes.<sup>42</sup> As part of the program, the government intensified year-round iron and folic acid supplementation and anemia testing and treatment. These efforts coincided with the previously mentioned iron and vitamin fortification of staple foods like oil, milk, rice, and wheat.

**FIGURE 5.5** Percentage of population with access to clean water



Source: UNICEF, "Drinking Water," data for India

**FIGURE 5.6** Percentage of population using at least basic sanitation services



Source: UNICEF, "India: Sanitation"

## SANITATION AND CLEAN WATER

Many diseases and inadequate nutrition are intricately linked to limited access to modern sanitation or clean water. There has been slow and steady improvement with the population's access to clean water (see fig. 5.5). However, certain practices such as open defecation continued to stall progress. Open defecation greatly increases the likelihood of diarrheal diseases, which are responsible for one in nine child deaths worldwide.<sup>43</sup> At the turn of the century, approximately

75 percent of India's population still practiced open defecation, and rates of bacterial, viral, and parasitic worms were high among the most vulnerable populations, specifically children.<sup>44</sup> Consequently, improving access to sanitation and reducing open defecation was a key policy initiative by the Indian government. In 1999, the government launched the Total Sanitation Campaign to improve sanitation coverage throughout the country, especially in rural areas; however, progress remained slow (see fig. 5.6).<sup>45</sup>



Swachh Bharat Abhiyan (Clean India Now), introduced in 2014, sought to eliminate open defecation and make India “Open Defecation Free” by 2019.<sup>46</sup> The key features of the program were toilet construction, eradicating manual scavenging, and public awareness campaigns around sanitation practices. Providing privacy and access to menstrual products for women was also a key concern. Phase one of Swachh Bharat Abhiyan, which focused on expanding access to toilets, was mostly successful. According to the Indian government, 98 percent of rural areas had toilet coverage by 2019, and 92 million toilets were constructed under the program initiatives.<sup>47</sup> However, a survey conducted by the National Statistical Office (NSO) found that only 71 percent of rural houses had access to toilets. The toilets were also often inadequate as most relied on single-pit or septic systems, many of which became unusable during floods.<sup>48</sup> A lack of adequate monitoring of open defecation by the health ministries meant it was difficult to obtain accurate numbers, meaning the government may have overestimated success rates.<sup>49</sup>

Access to toilets and improved sanitation also has broader social impacts, such as reducing the risk of sexual assaults toward women and improving school retention by keeping girls in school when they begin menstruation. Because many schools lack adequate facilities, many girls leave school upon menstruation owing to privacy and sanitation concerns.<sup>50</sup> Alongside expansion of access to improved sanitation, access to clean drinking water was another key factor negatively impacting India’s population. Fetching water also has dramatic negative effects on women and girls; many girls may leave school, especially in rural areas, to help fetch water for their families. According to UN Women, in 80 percent of water-deprived households, women and girls are the ones responsible for collecting water.<sup>51</sup> Consequently, many girls in India are removed from school to help meet a family’s water needs. As of 2023, 93 percent of Indians in rural areas now have access to safe and clean

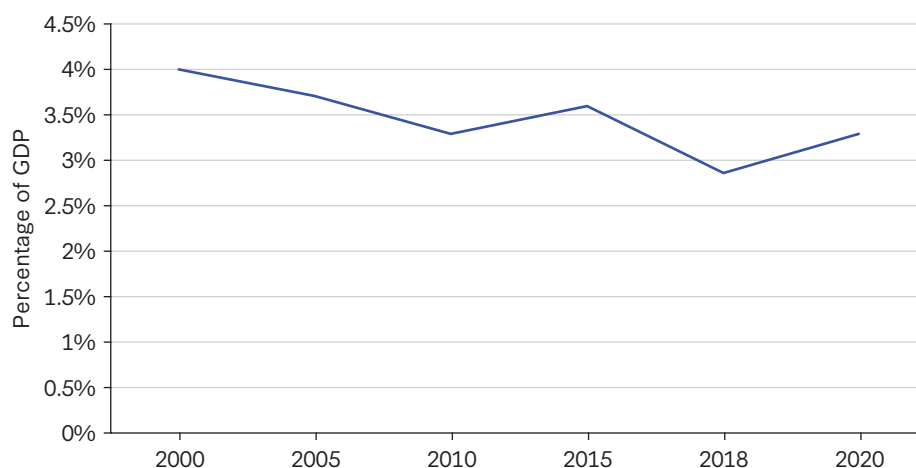
drinking water, a dramatic improvement from only 25 percent with access at Independence and 70 percent in 2000.<sup>52</sup>

## HEALTHCARE INFRASTRUCTURE AND ACCESS

The World Health Organization recommends countries allocate approximately 5 percent of their GDP to health expenditure. India has never met this threshold and has struggled to provide adequate healthcare coverage for a large portion of its population. Estimates vary based on sources and classifications; however, according to the World Bank, India came near the WHO recommendation in 2000 by allocating 4 percent of overall GDP toward healthcare. However, this allotment continued to steadily decline between 2005 and 2010, going from 3.79 to 3.27 percent, respectively (see fig. 5.7). However, investments began further declining in the first years of the Modi administration. By 2018, budget allocations toward healthcare dropped to 2.86 percent, the lowest of the twenty-first century. The healthcare-spending budget increased during and amid the COVID-19 pandemic, when 3.28 percent GDP was spent on healthcare. However, a 2024 *Lancet* report asserts that India spends just 1.2 percent of GDP on healthcare, the lowest of any G20 countries.<sup>53</sup> In response, India claims that spending on healthcare is at an “all-time high” and “out-of-pocket expenditure has decreased.”

Despite these criticisms, the government of India emphasizes its expanded access to healthcare over the past decade, specifically for underserved areas and peoples. In 2017, the government launched the Ayushman Bharat (AB) scheme, which aims to achieve Universal Health Coverage (UHC). This was done through two key initiatives. The first initiative sought to establish 150,000 Health and Wellness Centers (HWCs) across the country by transforming 150,000 subcenters, primary health centers, and urban primary health centers into AB-HWCs by the end of 2022. The

**FIGURE 5.7** Healthcare spending



**Source:** World Bank's World Development Indicators

purpose of the HWC is to provide comprehensive healthcare and emergency medical services in addition to pharmaceutical access and diagnostic services. According to the government, 154,000 AB-HWCs were established by 2024. However, critics argue that this number is an overestimate and that the actual functionality and quality of services provided at these centers falls short of intended standards.<sup>54</sup> There are also concerns about the sustainability of the centers owing to funding challenges and lack of trained professionals.<sup>55</sup>

The Ayushman Bharat scheme also introduced the Pradhan Mantri Jan Arogya Yojana (PM-JAY) health insurance scheme, which provides healthcare funding to the bottom 40 percent of the Indian population, around 500 million people. The insurance covers healthcare costs of up to \$6,000 per family per year and partnered with both public and private facilities to provide comprehensive care. PM-JAY has significantly expanded access to healthcare for the underprivileged; however, like the AB-HWCs, considerable challenges remain including high out-of-pocket expenses, inconsistent or poor quality of care, and low levels of awareness regarding the program's benefits and availability.<sup>56</sup>

The changes driven by the Ayushman Bharat scheme coincided with a rapidly changing healthcare landscape in India. Since Independence, India's healthcare system has evolved from a primarily public driven model to a mixed system with significant private-sector involvement. India's healthcare system at Independence was rudimentary to nonexistent in many places. Establishing basic primary health centers and community health centers was a top priority for the early government. The government sought to provide universal healthcare as established in the National Health Policy of 1983.<sup>57</sup> Around this time, private healthcare facilities also started to emerge to address the shortcomings of government health facilities and programs. The private facilities primarily catered to wealthier families who could afford the costs and sought quicker and more specialized care.

By the 2000s, the government sought to establish new hospitals, medical colleges, and health facilities throughout the country. At the same time, the government increasingly relied on public-private partnerships to achieve these goals. By the 2010s, private healthcare facilities dominated the healthcare scene in India, as 70 percent of urban households and 63 percent of rural households

relied on private facilities, especially for inpatient care. Corporate hospitals became increasingly popular during this time, and large hospital chains became increasingly dominant. Apollo Hospitals, Fortis Healthcare Ltd, and Manipal hospitals have multiple sites throughout the country and now account for the largest hospitals across India. In 2023, Apollo Hospitals had more than 73 hospitals, 5,000 pharmacies, and 1,100 diagnostic centers.<sup>58</sup> Their domination of the private healthcare industry in India led to a yearly revenue of US\$2.20 billion.<sup>59</sup>

Despite increased access to healthcare facilities, both public and private, India still faces significant challenges in accessibility, quality, and infrastructure. The COVID pandemic exposed and exacerbated these vulnerabilities, overwhelming healthcare facilities and straining resources. Like most of the world, India struggled to respond and adapt to the challenges of a global pandemic.

## THE IMPACT OF THE COVID PANDEMIC ON INDIA'S HEALTHCARE SYSTEM

The 2020 COVID pandemic challenged even the most resilient and developed countries and likewise proved devastating for India. India's initial response to its first case of COVID in the state of Kerala was swift. The state government quickly established isolation wards, converted hundreds of hostels, schools, and unoccupied buildings into COVID care centers, and carried out extensive contact tracing for those potentially exposed to the virus.<sup>60</sup> However, new cases continued to rise across the country, causing alarm and leading India to declare a nationwide lockdown on March 24, 2020.

The efforts to contain the virus and manage the health crisis came at a severe economic cost. India attempted to ease this impact through several economic relief packages with a focus on direct cash transfers, food distribution, and credit support for small businesses. The Atmanirbhar

Bharat Abhiyaan (self-reliant India) campaign was launched to boost the economy, with a focus on local manufacturing and self-sufficiency.<sup>61</sup> However, this program experienced catastrophic failures and could not effectively deliver aid and relief to those suffering the most.

To lessen the global and local impact of COVID, India immediately began focusing on creating an effective vaccine. Covaxin by Bharat Biotech and Covishield by the Serum Institute of India were approved for emergency use in January 2021.<sup>62</sup> India also focused on promoting vaccine diplomacy, known as Vaccine Maitri (vaccine friendship) by sharing its vaccine to various countries around the world.<sup>63</sup> The initiative sought to display India's role as a major pharmaceutical hub. However, the devastating impact of India's second wave of COVID in April 2021 put a halt to that initiative and demonstrated how India's focus on vaccine diplomacy had perhaps left many Indians still vulnerable, as much of the population was still unvaccinated.<sup>64</sup>

The severity of the COVID crisis in India escalated dramatically during the second wave in April and May 2021. The new wave, caused by the Delta variant, was characterized by a massive surge in cases and deaths, overwhelming the healthcare system. There were shortages of hospital beds, oxygen, and essential medicines. Critical shortages of medical oxygen led to widespread scenes of patients dying in the streets and outside hospitals due to lack of oxygen. During the peak, daily new cases exceeded four hundred thousand, and daily deaths reached over four thousand.<sup>65</sup> India's infrastructure was unprepared to carry out so many cremations and burials, leading to horrific images of makeshift morgues.

A study by the Brookings Institution found that India's response to COVID was poor due to low levels of testing, implementation failures in containing the spread during lockdown, and serious impacts on other health services.<sup>66</sup> Furthermore,

an accurate number of deaths in most states is unknown owing to the lack of formal death registrations and unreliable data, meaning the country's death toll is likely much higher than reported. Later analyses of excess deaths from civil registration data found that India's deaths were likely eight to ten times higher than reported, with an estimated range of 2.8 to 5.2 million deaths.<sup>67</sup>

Beyond the health and economic toll the pandemic had on India broadly, it also took a great social and humanitarian toll on the informal sector, migrant workers, and daily wage earners. The abrupt March 2020 lockdown resulted in the closure of factories, construction sites, and other businesses, leading to a sudden and massive loss of employment for migrant workers. The lockdown triggered a large-scale reverse migration, as millions of workers attempted to return to their native villages, often on foot because of the suspension of public transport.<sup>68</sup> Many migrant workers were stranded in cities without adequate food, shelter, or money and faced heightened health risks caused by crowded living conditions, lack of access to healthcare, and poor sanitation facilities. Many migrant workers died from exhaustion and lack of medical care during the pandemic-induced mass migration.<sup>69</sup> The government attempted to provide some expanded relief to migrant workers through programs such as Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY).<sup>70</sup> However, the implementation and reach of these measures were widely inconsistent; migrants in some states revealed that nearly no food or aid was available.<sup>71</sup>

Following the devastating impact of the second wave of COVID, India amplified its vaccine campaign and achieved widespread coverage, including significant coverage among high-risk groups. Seventy-five percent of all Indians received at least one dose of the COVID vaccine.<sup>72</sup> The vaccination rates appeared to help reduce the number of severe COVID cases, hospitalizations, and deaths. However, like most countries in the

world, vaccine hesitancy remained a challenge, particularly in rural areas.<sup>73</sup> Despite these challenges, the intensified vaccination efforts marked a crucial step toward controlling the pandemic and mitigating its impact on India's health system and economy.

Overall, the pandemic revealed significant gaps in India's social security and healthcare system. COVID also had a detrimental effect on India's advances in health and education.<sup>74</sup> School closures and the shift to online learning further marginalized the most vulnerable communities, especially those with limited access to the internet. Not only did this lead to learning loss, but it also led to an increased dropout rate; girls were particularly at risk of dropping out because of increased household responsibilities and early marriages. The shift to focus healthcare on COVID also meant that non-COVID-related health services were disrupted. The delivery of regular health services, including maternal and child health, immunization programs, and treatment of chronic diseases, became secondary. School closures disrupted midday meal schemes, which are crucial for the nutrition of many economically insecure children. This disruption led to increased food insecurity among many families, especially migrant workers who no longer had employment. Although the challenges COVID brought to India are not unique, the pandemic harshly highlighted India's vulnerabilities.

## **SHORTCOMINGS OF INDIA'S HEALTHCARE SYSTEM**

Like most developing countries, India faces significant challenges when it comes to public health. India's diversity, poverty, and large population exacerbate multiple underlying concerns. India has seen significant improvements in several key indicators, as highlighted in this chapter. However, several monumental challenges and criticisms remain. For one, there is an overreliance on private-sector healthcare to address

the shortcomings of the government-led health programs. As with everything else in India, there remains significant disparities and disadvantages based on region, urban/rural setting, and socio-economic status. States like Uttar Pradesh have a life expectancy of sixty-three years compared with seventy-three years in Goa and Kerala.<sup>75</sup> Some states like Karnataka, Kerala, Tamil Nadu, and Goa have more than 1 doctor per 1,000 people (the WHO recommendation) whereas other states like Jharkhand have only 1 doctor per 8,000 people.<sup>76</sup> The quality of care across states also varies significantly. Concerns about poor training, patient safety, corruption, and overall quality of care are widespread in the most underserved areas.

The Modi administration has attempted to address these shortcomings, but there have been several specific critiques toward these initiatives. Many families continue to struggle to get healthcare access and coverage because of bureaucratic difficulties and coverage gaps even since the introduction of the Ayushman Bharat program. This poor coverage often intersects with limited access to healthcare facilities and usually impacts the most vulnerable communities. Critics also say the PM-JAY program is overly reliant on private providers, which have higher and hidden costs that still leave patients with bills they are unable to pay.

Allopathic doctors have also expressed concern about the increased expansion and emphasis on ayurvedic medicine by the Modi government. The new ministry of AYUSH (an acronym that stands for Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy) was established in 2014. Previous governments had always integrated traditional medicine, specifically Ayurveda, into the healthcare system, such as the Department of Indian Systems of Medicine and Homeopathy established in 1995.<sup>77</sup> The creation of the standalone AYUSH ministry, however, elevated the status of natural medicine and yoga within India's healthcare system. This increased emphasis was also accompanied with nearly \$500 million a year

in support from the government.<sup>78</sup> The government also began heavily promoting Ayurveda and ayurvedic products through its diplomatic and trade partners.

Although many were happy to see the elevation of India's traditional medicine and practices, others raised several concerns. For one, skepticism remains about the scientific rigor surrounding each of these practices and remedies, especially ayurvedic medicines.<sup>79</sup> There is a lack of peer-reviewed studies showing effectiveness of ayurvedic medicines in addition to doubts about the lack of regulations. One study found that 20 percent of ayurvedic products in the United States and India contain high levels of toxic metals, including lead, mercury, and arsenic.<sup>80</sup>

The lack of scientific rigor and regulations led to Supreme Court involvement with one ayurvedic company. In 2023, the Indian Supreme Court found the multibillion-dollar ayurvedic company Patanjali had deceived the Indian public by claiming that its products could cure multiple diseases and conditions, including COVID. The Supreme Court temporarily banned Patanjali from advertising. Although many companies have been guilty of false advertising, what makes Patanjali unique is its close connections to the BJP. Since the Ministry of AYUSH came into existence, the government has placed higher priority on ayurvedic medicines and facilities, providing new economic opportunities for those in the field. In 2017, Prime Minister Modi inaugurated Patanjali's research facility in 2017 and received nearly US\$50 million in land discounts in states controlled by the BJP.<sup>81</sup>

The promotion of Ayurveda by the government also led to additional concerns such as potential exclusion of medical traditions not rooted in Hinduism. Moreover, there is concern that promotion of Ayurveda may come at the expense of more effective allopathic medicine.<sup>82</sup> Some patients may choose to forgo lifesaving medications and procedures in favor of unproven naturopathic



remedies.<sup>83</sup> This is especially worrisome given all the other concerns outlined in this chapter regarding poor healthcare funding and infrastructure.

The increased reliance on private-sector healthcare and the promotion of traditional medicine, such as Ayurveda, have been met with mixed reactions as India works toward healthcare expansion. Moreover, just as there are concerns about the potential saffronization of education, there are similar concerns about the healthcare system. Despite these criticisms, however, India's rapid advances in the healthcare industry are noteworthy.

As India works to improve its healthcare sector, parallel efforts are also being made to address critical issues in the education system. At the turn of the twenty-first century, nearly 40 percent of India's population was still living in poverty and many residents lived in dire circumstances.<sup>84</sup> Broad access to education was considered a key foundation in helping alleviate poverty and provide opportunities for growth. As a result, the government introduced several education programs in the early 2000s that aimed to expand access to quality education.

## THE STATE OF EDUCATION

### PRIMARY EDUCATION

Article 21A of the Indian Constitution, added by the 86th Amendment Act of 2002, enshrines the right to a free education as a fundamental right for children ages six to fourteen. To help fulfill the massive set of educational goals set forth by Article 21A, several new programs and initiatives have been established. The Sarva Shiksha Abhiyan (SSA) was one key program launched in 2002 that created a partnership among the central, state, and local governments.<sup>85</sup> The SSA had four key objectives, including universal access to primary education, increasing retention rates, bridging the gender and social gaps in education, and improving the quality of education.<sup>86</sup> The SSA sought to

meet these goals by rapidly building new schools and updated classrooms, recruiting and incentivizing new teachers, supplying texts and classroom tools, and providing accessible options for students with disabilities. Providing these resources in underserved areas was a key priority.

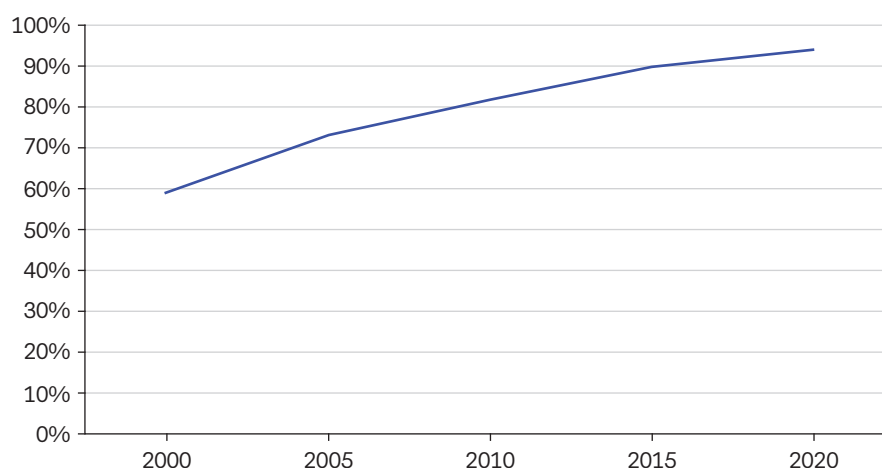
To expand on the efforts of the SSA, the Indian government passed the Right of Children to Free and Compulsory Education Act in 2009, commonly known as the Right to Education (RTE) Act. The RTE focused on improving the quality of education while also increasing investments in it. The central government invested US\$38.2 billion into the RTE over five years and provided 65 percent of overall funding while states contributed 35 percent.<sup>87</sup> In addition to a focus on broad access to education, the government sought to ensure the quality of the teachers and infrastructure. The RTE required schools to have proper lighting, ventilation, safe drinking water, functional toilets, a library, and a kitchen to prepare midday meals. Teachers were also expected to have professional training from the National Council for Teacher Education (NCTE) and not have a student-teacher ratio higher than 30:1. The act also banned any sort of physical punishment to be used on students. The RTE new requirements also extended to private schools as well and required them to reserve 25 percent of seats to children based on economic status or caste.

The RTE and the SSA, alongside additional programs, helped make significant strides in increasing access to primary education. By 2015 primary enrollment rates rose to over 90 percent (see fig. 5.8).<sup>88</sup> Although there were still gaps in access, there was a significant improvement among women and marginalized communities. This initiative was further motivated by India's desire to meet the second MDG of achieving universal access to primary education.

The substantial increase in primary education access signifies remarkable improvement over a period of two decades. There are still notable



**FIGURE 5.8** Primary school completion rates



**Source:** UNESCO Institute for Statistics

concerns though, particularly about the quality of the education and facilities. Many students still did not achieve age-appropriate readiness for reading and math. The Annual Status of Education Report (ASER) found that only half of students in the fifth grade could read at the second-grade level and only 28 percent of them could solve a simple division problem. Learning outcomes were the worst in Bihar, Uttar Pradesh, and Jharkhand and best in Kerala, Himachal Pradesh, and Punjab.<sup>89</sup>

Dropout rates were significantly reduced but remained higher than the goal of universal primary completion. About 3 percent of students drop out before completing the eighth grade and 12.6 percent before completing tenth grade, with dropout rates higher for girls.<sup>90</sup> Social factors such as early marriage and household responsibilities often lead to higher dropout rates among girls. Some sources have also expressed concerns that these numbers underestimate dropout rates.<sup>91</sup>

It also remained difficult to obtain and retain well-trained teachers, especially in underserved areas. Chronic teacher absenteeism remained a problem throughout the country. One World Bank study found that teacher absenteeism in India is around 25 percent. States like Uttar Pradesh, Bihar, and

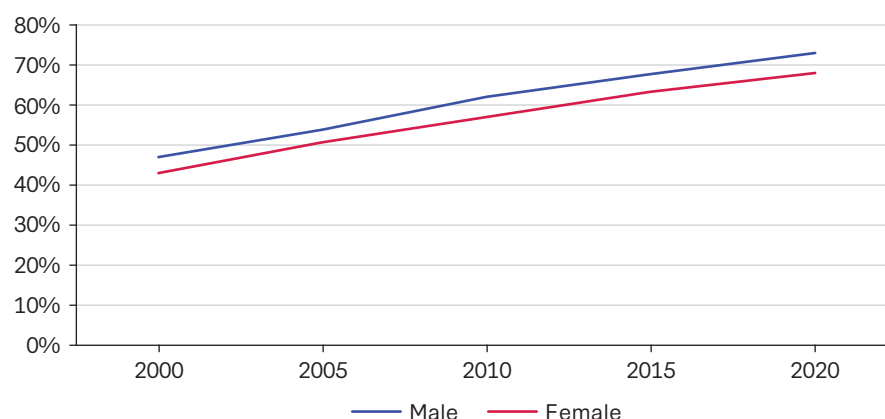
Rajasthan had the highest rates of absenteeism in the country.<sup>92</sup> Reasons for teacher absenteeism vary but reflect broader socioeconomic issues such as poor working conditions, health concerns, poor infrastructure, and a lack of accountability.

## SECONDARY EDUCATION

While the SSA focused on access to primary education, the Rashtriya Madhyamik Shiksha Abhiyan (RMSA) program was introduced in 2009 to help improve the quality and access to secondary education. The RMSA sought to provide universal access to secondary-level education by 2017 and universal retention by 2020.<sup>93</sup> Like the SSA, the RMSA also sought to improve the quality of education by recruiting and training new teachers, improving the educational infrastructure, and closing the gender, caste, and socioeconomic gaps. The RMSA took similar steps to the SSA by constructing new schools, adding libraries and sanitation facilities, providing free textbooks, and improving the quality and training of teachers.<sup>94</sup>

Although India did not meet its goal of universal access to secondary education by 2017, overall secondary education rates drastically improved (see fig. 5.9). The gross enrollment ratio (GER)

**FIGURE 5.9** Secondary school enrollment rates by gender



**Source:** UNESCO Institute for Statistics

for secondary education (grades 9 and 10) went from 45 percent in 2000 to 76 percent by 2020.<sup>95</sup> Higher secondary education (grades 11 and 12) enrollment increased from about 28 percent in 2000 to 51 percent in 2020. Access to secondary education also dramatically improved along gender-based lines. A 2019 study even found that a slightly higher percentage of girls are enrolled in secondary education (62 percent) compared with boys (61 percent).<sup>96</sup> As with other indicators there remains an urban-rural gap and variation among different states. The secondary enrollment in rural areas was approximately 70 percent, compared with 85 percent in urban areas. States like Kerala, Tamil Nadu, and Himachal Pradesh had the highest state-level enrollments compared with the lowest performing states of Bihar, Uttar Pradesh, and Jharkhand.<sup>97</sup>

The RTE and the SSA/RMSA were accompanied by several additional programs to improve overall attendance and completion rates, such as the midday meal scheme. The midday meal scheme was originally introduced in 1995 but expanded in 2001.<sup>98</sup> The program required the provision of free hot lunches for children in government and government-aided schools. The midday meal scheme was an important part of conquering two key issues at once, access to education and

nutritional food. According to data from the World Bank, in 2000, nearly 45 percent of children under the age of five were underweight and around 52 percent of children had stunted growth, indicating chronic malnutrition.<sup>99</sup> The midday meal scheme sought to ensure that students were receiving at least one hot and nutritious meal a day since malnourishment and undernourishment have significant impacts on physical and mental development. By 2020, the rates of undernourishment and malnourishment had reduced but still remained high. According to the National Family Health Survey (NFHS-5), 35.5 percent of children under the age of five were stunted and 32.1 percent were underweight.<sup>100</sup>

Although the RTE and other programs made substantial progress, India was still falling short on meeting several of its educational goals, particularly in secondary and tertiary education. The Modi government, which came into power in 2014, implemented several new programs aimed at accelerating educational advancements by increasing the education budget at the federal and state levels. One of the largest suggested educational overhauls occurred in 2020 with the proposal of the National Education Policy (NEP). The proposal seeks to replace the National Policy on Education from 1986 and increase the budget

allocation toward education from 3 to 6 percent to meet several goals and transform the nature of India's education system.<sup>101</sup> The NEP has various foundational components focused on primary, secondary, higher education, and beyond. Since the goal of universal primary education access had mostly been achieved, the new focus is on access to early childhood care and education, which sought to expand education to children ages three to six. This included providing high-quality educational access at rural childhood care centers (known as *anganwadis*), preschools, and preprimary schools.<sup>102</sup> This focus coincided with the creation of the National Early Childhood Care and Education (NECCE), whose purpose is to monitor and assess educational outcomes and curriculum at the early childhood phase and help prepare children for primary school.<sup>103</sup>

The NEP also proposes changing the curricular structure of the education program. India traditionally follows a 10+2 system, whereby students receive ten years of general education plus two years of specialized education after year ten. The 10+2 system is being phased out to transition to a 5+3+3+4 system, which more closely resembles many Western education systems: five years of foundational school from preprimary to grades 1 and 2, three years at the preparatory stage from grades 3 to 5, three years at the middle stage from grades 6 to 8, and four years at the secondary stage from grades 9 to 12. The change in the educational structure coincides with the goal of creating a more interdisciplinary and integrated curriculum that focuses on developing both creative and analytical skills.<sup>104</sup>

The NEP also suggests reducing standardized testing and "exam coaching culture," stating that students were spending too much time with exam preparation instead of focusing on holistic educational development.<sup>105</sup> Assessment reform is supposed to shift from "summative" to "formative" and more greatly emphasize analysis, critical thinking, and conceptual clarity. There

were also key proposed changes to the board exams. Students generally take exams at the end of Class 10 and Class 12. These exams are crucial as they play a significant role in determining students' future academic and career paths. The content of the board exams was changed to focus on core capacities like analytical skills instead of memorization and expanded offerings on subjects, content, and timings to reduce the high-pressure surrounding exams. The NEP 2020 also sought to expand the curriculum to be more multidisciplinary, including more classes in the arts, sciences, sports, and vocational subjects so that students can explore and develop their interests.<sup>106</sup>

The NEP 2020 also made several proposed changes that received significant attention and criticism. One policy that led to criticism among many was the proposed establishment of the centralized Higher Education Commission of India (HECI).<sup>107</sup> The purpose of this reform is to act as a single regulatory body for higher education rather than leaving it to the state level. Many state leaders expressed concerns about excessive centralization and potential centralized bureaucratic control over educational institutions.<sup>108</sup> Another major criticism of NEP 2020 was the three-language formula, which emphasized teaching in the regional language instead of English, especially in the foundational years.<sup>109</sup> Many non-Hindi-speaking states were especially critical of this approach, which requires all Indian students to learn at least two native Indian languages and one regional language through fifth but ideally eighth grade.<sup>110</sup> English will be taught as a third and essential language. This policy was criticized for potentially disadvantaging students in an increasingly globalized world where English proficiency is considered a critical skill. Critics argue that this may also lead to the imposition of Hindi on non-Hindi-speaking regions, which has long been a concern in the southern part of India, whose Dravidian language families are completely different from Northern Indian languages.<sup>111</sup> Many

states have not yet implemented the NEP owing to regional language concerns, and there is speculation that many states will use the NEP as a bargaining chip following the BJP's failure to secure a parliamentary majority in the 2024 election.<sup>112</sup>

There have also been allegations about the potential saffronization of education. In addition to many of the structural changes in the education system discussed above, there have been allegations about significant changes to the content of the curriculum. Critics claim that the shift in curriculum increasingly saffronizes educational content in a variety of ways. For one, there is concern about a shift in the focus of some of the content taught to students. Several reports have highlighted how textbooks and classroom lessons increasingly emphasize Hindu culture and history, often at the expense of other religious and cultural contributions. For example, there have been reports of history textbooks diminishing, or even demonizing, the role of Mughal emperors and other non-Hindu figures in Indian history. Specific chapters related to the Mughal period and events like the assassination of Mahatma Gandhi by a Hindu nationalist have been removed from textbooks.<sup>113</sup> In Karnataka, chapters on social reformers like Periyar and Bhagat Singh were removed, while speeches by RSS founder K. H. Hedgewar were added.<sup>114</sup> Additionally, dubious claims such as ancient Indians knowing about atomic theory and plastic surgery have been included in the curriculum.<sup>115</sup> The inclusion of texts like the Bhagavad Gita in the curriculum of several states and the removal of content related to secular and pluralistic values are also seen as efforts to push a Hindu nationalist agenda.<sup>116</sup>

The increased emphasis on Sanskrit and “traditional Indian knowledge systems” is also viewed by some as part of the saffronization agenda. While proponents argue that promoting Sanskrit helps preserve India's heritage, critics see it as prioritizing Hindu cultural elements.<sup>117</sup> Finally, there have been numerous instances of individuals with strong RSS or BJP affiliations being

appointed to key educational positions, including vice-chancellors and heads of educational bodies like the University Grants Commission (UGC) and the National Council of Educational Research and Training (NCERT).<sup>118</sup> This has raised concerns about appointments being based on ideological alignment rather than academic merit.

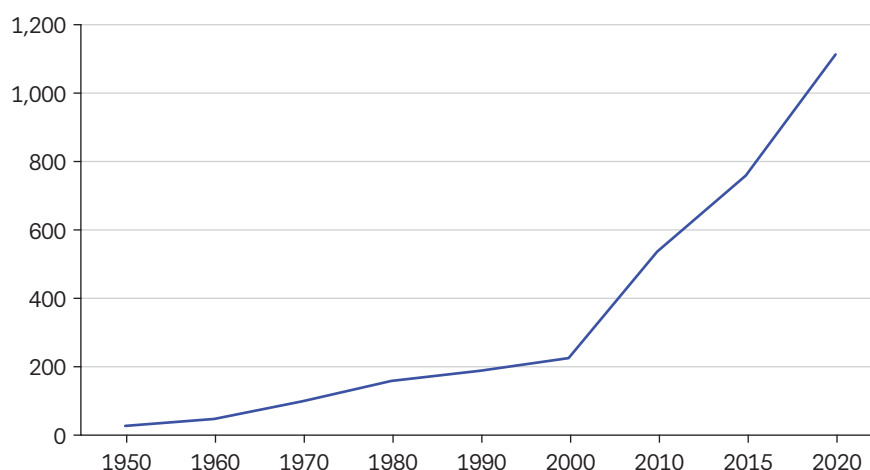
Supporters of these changes argue that they are necessary corrections to a previously distorted and Eurocentric curriculum that neglected India's indigenous cultures and histories, where Hinduism is central. They claim that emphasizing India's Hindu heritage is a way to restore national pride and cultural identity. However, critics contend that these changes point to a larger problem of an increasing saffronization in India across multiple domains.

## HIGHER EDUCATION

India's higher education sector has grown tremendously in terms of the number of institutions, student enrollment, and academic diversity. At Independence, India's higher education infrastructure was limited, with approximately twenty universities and five hundred colleges.<sup>119</sup> However, rapid expansion began shortly after. Of key importance was the establishment of the Indian Institute of Technology (IIT) in 1951. The IITs, which would grow to multiple locations throughout India, are held in high regard for their commitment to a high-level technical education. India's colleges continued to grow in the 1970s and 1980s, which led to the expansion of universities and an increased focus on establishing regional engineering colleges. The liberalization era of the 1990s was the kick start to rapid expansion of India's higher education environment, specifically the growth of private institutions, mostly focused on engineering and management.<sup>120</sup>

As of 2023, India has over a thousand universities, including central universities, state universities, deemed (government-recognized) universities, and private universities.

**FIGURE 5.10** Number of universities in India



**Source:** All India Council for Technical Education

Additionally, there are over forty-two thousand colleges affiliated with these universities.<sup>121</sup> The GER in higher education has increased significantly, reaching around 27.1 percent in 2019–20, indicating that more than a quarter of the eligible population is pursuing higher education.<sup>122</sup> The available content of higher education has also expanded with increased programs offering social sciences and humanities. Beyond the IITs, institutions like the IIMs (Indian Institutes of Management), AIIMS (All India Institutes of Medical Sciences), and NITs (National Institutes of Technology) gained increasing recognition for their quality of education.<sup>123</sup>

One of the most noticeable changes in the higher education environment is the growth of private universities and colleges. As of 2024, private institutions constituted approximately 78.6 percent of all colleges in India, catering to about one-third of total college enrollment.<sup>124</sup> This coincides with the goals of the NEP, which emphasizes the importance of private institutions in achieving educational goals. The NEP specifically seeks to improve the quality of higher education, increase multidisciplinary learning, and increase the GER from 27 percent in 2020 to 50 percent by 2035.<sup>125</sup> The number of universities has grown

exponentially since 2000, with the largest growth among private institutions (see fig. 5.10).

Despite quantitative growth, challenges remain in terms of quality, faculty shortages, research output, and employability of graduates. Many states have limited access to quality programs. Many private institutions have also been criticized for poor teaching standards, weak governance, and inadequate infrastructure. The uneven quality has prompted regulatory bodies like the All India Council for Technical Education (AICTE) to impose moratoriums on new engineering colleges owing to low attendance and quality concerns.<sup>126</sup> The NEP hopes to address this by consolidating smaller institutions and ensuring a minimum enrollment to improve resource utilization and education quality.<sup>127</sup> However, implementation and oversight has remained challenging.

## RESERVATIONS IN HIGHER EDUCATION

The reservations system in India's higher education has been enshrined in the Constitution since 1950 and is aimed at addressing social inequities by reserving a specific number of college admission seats for specific groups, specifically Scheduled Castes (SC), Scheduled Tribes (ST), and Other

Backward Classes (OBC). Reservations apply to public institutions including central and state universities and government-funded higher education institutions.<sup>128</sup> Approximately 15 percent of seats are reserved for Scheduled Castes, 7.5 percent for Scheduled Tribes, and 27 percent for OBCs. Persons with disabilities receive another 5 percent of seats. In 2019, there were additional provisions added to reserve 10 percent of seats for “Economically Weaker Sections (EWS),” who are not SC/ST or OBC.<sup>129</sup>

The expansion of the EWS quota in India’s reservation system represents a significant shift toward addressing economic disparities alongside traditional caste-based inequities. However, many still criticize the reservations system in higher education saying that it undermines meritocracy and reinforces caste-based divisions. The term “creamy layer” is also a widely used term to classify those more affluent and better-educated members of OBC who benefit from the policies compared with those who are more disadvantaged.<sup>130</sup> The introduction of the EWS quota was framed as an attempt to address this concern. However, many still express concerns about how well the reservations system addresses the issues of deep-seated inequality throughout the country.<sup>131</sup>

## CONCLUSIONS ON EDUCATION IN INDIA

India’s education sector has experienced substantial growth and transformation in recent decades. Literacy, education rates, and higher education enrollment have skyrocketed and the number of educational institutions at all levels has greatly expanded. This growth has been driven by economic liberalization and government initiatives like the RTE and SSA. Despite improvements, challenges such as high dropout rates, teacher absenteeism, and regional disparities persist. The National Education Policy aims to further overhaul the system with increased budgets, curriculum reforms, and a focus on early childhood education and digital infrastructure. However, many

elements of the education reforms face significant criticism, especially from non-BJP-led states. Many question how effective the reforms will be at transforming India’s education system.

## CONCLUSION

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India’s journey toward improving health and education outcomes since Independence is marked by significant progress and persistent challenges. Life expectancy and literacy rates have improved dramatically, but disparities based on gender, caste, and socioeconomic status persist. India has emphasized that addressing these shortcomings and coverage gaps will be a priority of the government moving forward.

India’s public health landscape has seen substantial improvements since Independence, with notable advancements in eradicating diseases and increasing life expectancy. Programs targeting infant, child, and maternal health, vaccination coverage, and nutrition have contributed to these achievements. The Swachh Bharat Abhiyan campaign successfully increased access to toilets and improved sanitation across the country, particularly in rural areas. The Ayushman Bharat scheme helped expand health insurance coverage for poor families, and Mission Indradhanush achieved significant increases in childhood vaccination coverage. However, significant challenges remain, including regional disparities, poor nutritional outcomes, infrastructure gaps, and access to quality and affordable care. The COVID pandemic further underscored these challenges.

Education outcomes across all measures have also improved drastically since 2000. More children are attending school, the gender gap in educational access is lessening, and higher education has expanded rapidly. Educational reforms, including the RTE and NEP 2020, have worked on increasing access and changing curricular structures. However, some implementation issues



and allegations of ideological influence persist. Further, the increased centralization of education through the establishment of the HECI has faced criticism for potentially undermining state autonomy.

In 2021, Prime Minister Narendra Modi unveiled the vision of Viksit Bharat (Developed India), aiming for India to become a developed country by 2047. The healthcare and education reforms outlined in this chapter are key elements of this vision. Continued reforms and investments in both are essential to creating a foundation for broader economic and social development and a more equitable and sustainable future for all Indians.

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