Updated on May 30, 2024 . 5 min read

Global Prevalence of Myopia (2024)

Written by
Mara Sugue

Medically Reviewed by
Dr. Melody Huang, O.D.

3 sources cited

In this article

Myopia, or nearsightedness, is a condition that continues to affect millions worldwide. As the world becomes more urbanized and digitalized, the rates of myopia have been on the rise, prompting researchers and healthcare professionals to investigate the causes, consequences, and potential solutions to this growing epidemic.

This article will explore the current global prevalence of myopia, highlighting the most significant statistics and trends across different age groups and regions. We'll also discuss projected trends in myopia, along with potential solutions and interventions to address this growing public health concern.

Global Myopia Prevalence: Key Statistics and Trends

Myopia Rates by Age Group

- In several Asian countries, the prevalence of myopia among late teenagers and young adults (Korea, Taiwan, and China) is reported to be between 84% and 97%.
-

In the United States, approximately 41.0% of children aged 5 to 17 in urban areas have myopia, with a nationwide prevalence estimated at 36.1%.

- Nearly 224 million people worldwide, or almost 3% of the population, are highly nearsighted. This means they need glasses or contacts stronger than -5.00 diopters to see clearly.

Myopia Prevalence in Developed vs. Developing Countries

The prevalence of myopia varies significantly between developed and developing countries. Higher rates are observed in developed regions, particularly urban East Asian countries.

Region	Myopia Prevalence
Urban East Asia	80–90%
United States	42%
Germany (adults 35–74)	35.1%
United Kingdom (adults 48+)	23.0%
Australia (adults 49+)	15.0%
Nigeria (adults 40+)	16.1%

Projected Myopia Rates by 2050

- Nearly 50% of the world's population is projected to be myopic by 2050, which equates to almost 5 billion people
- The projected prevalence of high myopia, in particular, is expected to reach almost 10% of the global population by 2050, translating to around 1 billion people at a significantly increased risk of permanent vision impairment
- In the United States, it's predicted that between 27% and 43% of cases of uncorrectable visual impairment in 2050 may be directly attributable to myopia

Economic Burden of Myopia Worldwide

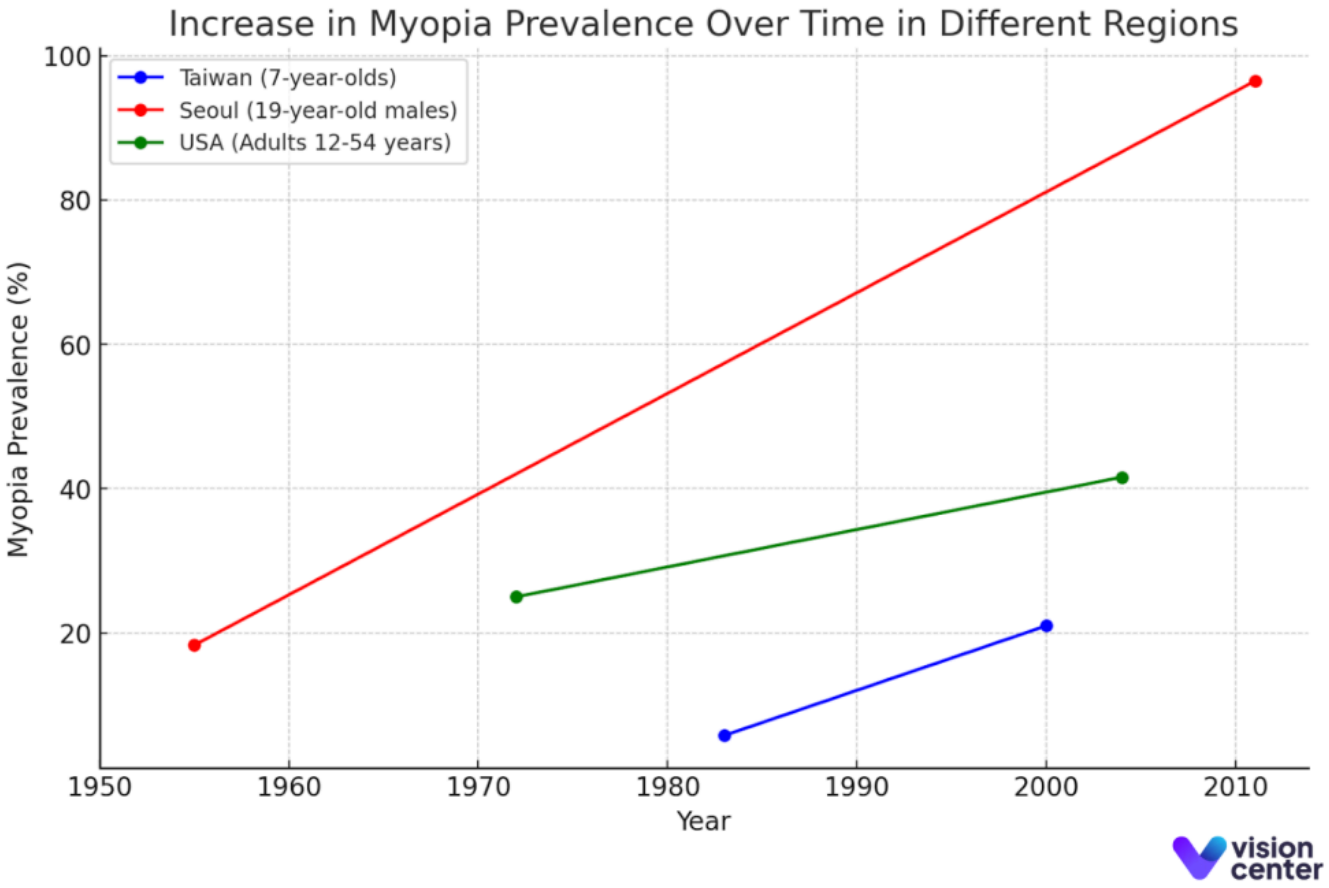
- The global potential productivity loss associated with vision impairment (VI) and blindness due to uncorrected myopia in 2015 was estimated at $244 billion
- Southeast Asia, South Asia, and East Asia were the regions significantly affected by lost productivity due to myopia, with productivity loss estimated at $40 billion and $35 billion, respectively
- The East Asia region, which includes China, had the greatest potential burden of productivity loss, around $150 billion

Trends in Myopia Prevalence Over Time

Studies have shown that the prevalence of myopia has been increasing rapidly over the past few decades, particularly in East Asian countries.

In Taiwan, for example, the prevalence of myopia among 7–year-old children increased from 5.8% in 1983 to 21% in 2000. Similarly, in Seoul, South Korea, the prevalence of myopia among 19–year-old males increased from 18.3% in 1955 to 96.5% in 2011.

This trend isn't limited to East Asia; other regions have also experienced a significant increase in myopia prevalence. In the United States, the prevalence of myopia among adults aged 12 to 54 years increased from 25% in 1971–1972 to 41.6% in 1999–2004.



Causes of the Myopia Epidemic

Several factors have been identified as potential contributors to the increasing prevalence of myopia worldwide:

1. **Increased near work and screen time:** The rise in digital device use and extended periods of near work, such as reading and studying, have been associated with a higher risk of myopia development.
2. **Reduced outdoor time:** Spending less time outdoors has been linked to an increased risk of myopia. Exposure to natural light and distant focusing may protect against myopia development.
3. **Urbanization and education:** Urban environments and higher levels of education have been associated with a higher prevalence of myopia. This is possibly due to increased near work and reduced outdoor time.
4. **Genetic factors:** While environmental factors play a significant role in myopia development, genetic predisposition also contributes to an individual's risk of developing myopia.

Potential Solutions and Interventions

To address the growing myopia epidemic, several potential solutions and interventions have been proposed:

1. **Outdoor time:** Encouraging children to spend more time outdoors, particularly during daylight hours, may help reduce the risk of myopia development and progression
2. **Eye breaks and visual hygiene:** Promoting regular eye breaks during extended near work, such as the 20–20–20 rule (looking at an object 20 feet away for 20 seconds every 20 minutes), can help reduce eye strain and potentially slow myopia progression
3. **Myopia control therapies:** Interventions such as atropine eye drops, orthokeratology (ortho-k) lenses, and multifocal contact lenses have shown promise in slowing myopia progression in children
4. **Education and awareness:** Increasing public awareness about myopia, its risk factors, and the importance of regular eye examinations can help promote early detection and intervention
5. **Research and innovation:** Continued research into the causes, mechanisms, and potential treatments for myopia is crucial for developing effective strategies to combat this growing epidemic

The global prevalence of myopia has reached epidemic proportions, with rates continuing to rise across all age groups and regions. The projected rates of myopia by 2050 paint a concerning picture. Nearly half of the world's population is expected to be myopic, and a significant portion is at risk of permanent vision impairment due to high myopia.

The economic burden associated with myopia is substantial, with productivity losses in the billions of dollars, particularly in regions such as East Asia, South Asia, and Southeast Asia. Investing in vision correction services and myopia control measures could potentially lead to significant savings in productivity and improve the quality of life for millions of individuals worldwide.

Several factors, including increased work and screen time, reduced outdoor time, urbanization, and genetic predisposition, have been identified as potential contributors to the increasing prevalence of myopia. A multifaceted approach involving outdoor time, visual hygiene, myopia control therapies, education, and research is necessary to address this growing public health concern.

As the world continues to evolve and become more urbanized and digitized, it's crucial to address the growing myopia epidemic through proactive interventions and innovative solutions. By understanding the current prevalence, projected trends, causes, and potential solutions, we can work towards developing effective strategies to prevent, control, and manage myopia.

Updated on May 30, 2024

Related Articles

Mental Health Effects of Vision Loss

by Mara Sugue
3 min read

How Does Vision Impairment Affect the Economy?

by Mara Sugue
4 min read

LASIK Success Rates Statistics (2024)

by Mara Sugue

4 min read

How Do Eye Disorders Affect Children?

by Mara Sugue
4 min read

Cataract Surgery Success Rates

by Mara Sugue
3 min read

How Does UV Exposure Affect Eye Health?

by Mara Sugue
4 min read

3 sources cited

1. Holden, et al. "Global prevalence of myopia and high myopia and temporal trends from 2000 through 2050." Ophthalmology, 2016.

2. "Uncorrected myopia cost global economy US$244 billion in lost productivity in 2015." Brien Holden Vision Institute, 2016.

3. Wolffsohn, et al. “IMI–Myopia control reports overview and introduction.” Investigative ophthalmology & visual science, 2019.

Mara Sugue
Content Contributor

Mara Sugue, with a B.A. in Social Sciences, is a dedicated web content writer for Vision Center. She is committed to making eye health research accessible and understandable to people from diverse backgrounds and educational levels. Her writing aims to bridge the gap between complex vision health topics and readers' needs for clear, factual information.

Dr. Melody Huang, O.D
Medical Reviewer

Melody Huang is an optometrist and freelance health writer. Through her writing, Dr. Huang enjoys educating patients on how to lead healthier and happier lives. She also has an interest in Eastern medicine practices and learning about integrative medicine. When she’s not working, Dr. Huang loves reviewing new skin care products, trying interesting food recipes, or hanging with her adopted cats.

Listen to the Podcast

Social Links

Facebook

Twitter