

Why myopia has not increased in Finland and in Nordic countries similarly as in some Asian Countries?

Niko Setälä, MD, PhD¹, Marja-Liisa Franssila Sivanesan MSc², Olavi Pärssinen, MD, PhD³

1. Department of Ophthalmology, Wellbeing Services of Central Finland, Jyväskylä, Finland
2. Doctoral Program in Clinical Research, Helsinki University, Finland
3. Gerontology Research Centre and Faculty of Sport and Health Sciences, University of Jyväskylä, Finland

The prevalence of myopia has significantly increased worldwide, particularly in East and Southeast Asian countries, while in the Nordic countries the prevalence has remained relatively low. Studies have not been able to find genetic factors to explain the differences in the prevalence of myopia between different populations. The reasons for the differences in the prevalence of myopia seem to be found in environmental factors. The main environmental risk factors for myopia are increased near work and reduced outdoor activities. The difference in these factors may explain the differences in the prevalence of myopia.

The earlier myopia onset occurs, the higher the likelihood of its progression into various vision threatening pathological forms. Myopia typically appears after beginning school, highlighting the importance of the age of school enrollment. Additionally, factors such as homework load, study intensity, and the complexity of written characters can also influence progression.

Population density in the Nordic countries is much lower than in Asian urban areas. Being closer to nature makes it easier to engage in outdoor activities, such as walking or cycling to school and work.

The presentation compares in more detail the educational, environmental, and cultural factors that may explain the lower prevalence of myopia in Nordic countries as compared to East and Southeast Asian countries.