



## Urbanization as a factor for myopia progression

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Urbanization is the process of forming big cities whereby huge numbers of people become continually concentrated in comparatively small regions [1-4].

With reference to the review of the United Nations (UN), World Population Prospects, the world's population is estimated to increase from 7.7 billion in 2019 to 10.9 billion in 2100 [5]. Population growth, population ageing, migration, and urbanization are part of four important global trends indicating economic, social, and environmental development [6]. Therefore, distinct conception of the size, location, and distribution of the human population is essential for productively achieving a viable future [7]. An effectual observation of global population alteration will undoubtedly allow employment of well-organized policies to assign financial support, plan services, and compute populations at risk [7].

Urbanization results in many health issues including poor nutrition, pollution-related health problems, contagious diseases, poor hygiene, housing problems, and related health conditions [8].

Many factors may influence urbanization. These may include differences in natural population growth between rural and urban areas, rural-to-urban and international migration, and the extension of urban settlements through annexation and reclassification of rural settlements into small and big cities [1]. In addition, economic transformation, housing, infrastructure, and service delivery also play important roles [1].

Implications for migration and forced displacement are linked to ongoing demographic and technological trends [1]. These demographic and technological trends are obviously affecting people's lives and in particular their lifestyle [1-4]. These factors change people's lifestyle so that people are pushed into more near work activities [1-4].

Therefore, rapid urbanization is not only linked to an unavoidable rise in city populations, but also affects people's ways of interacting with new environmental conditions, which are full of near activities [1-4]. In addition, they are

exposed to limited living space, and thus once more subjected to near distances all the time [1-4].

Due to the fact that more near work activities combined with less outdoor time are going to be part of people's lifestyle in urban settings, this formulates urbanization as a significant feature in the development and progression of myopia [1-4]. This is simply due to the fact that there are plentiful documented lines of evidence to support the association between increased near work activities [1-4, 9-11] and less outdoor time with myopic progression [1-4, 9].

The more daily close work is done, the greater will be the rate of myopic progression [1-4]. This is strongly related to job requirements in small and big cities as intensive near work is required [1-4].

Since inadequate time spent outdoors [1-4, 11] and increased duration and intensity of near work activities [1-4, 10, 11] have been identified as chief environmental risk factors for myopia progression, home confinement during the outbreak of emerging infectious diseases such as coronavirus disease 2019 (COVID-19) will lead to further development of the myopic crisis [1-4, 11].

Environmental etiologies and epidemiological studies of myopia also show a strong association with urbanization, which can be confirmed by looking at the prevalence of myopia in urban areas versus rural areas [1]. In this context, there have been numerous studies proving a higher prevalence of myopia in adults and children living in urban settings, compared to adults and children living in rural areas [1]. Furthermore, generational differences of prevalence of myopia and high myopia have been found, with the highest rates in young adults and the lowest rates in older adults [1].

In conclusion, there should be appropriate and effective approaches toward urbanization and its lifestyles in order to prevent myopia progression [1-4]. This is extremely important as the observed rise in the prevalence of myopia and high myopia worldwide is a significant public health crisis and it is vital to immediately provide more necessary data

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to update researchers, clinical practitioners, public health workers, and policymakers [1-4].

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## DISCLOSURE

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