

## An Ecologic Study of Trends in the Prevalence of Myopia in Chinese Adults in Singapore Born from the 1920s to 1980s

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### Abstract

**Introduction:** This study aimed to investigate secular trends in the prevalence of myopia over 6 decades (from the 1920s to 1980s) in Chinese adults in Singapore. **Materials and Methods:** Parental myopia prevalence was estimated using a parent-completed questionnaire in paediatric cohorts that included: 1) The Singapore Cohort Of Risk factors for Myopia (SCORM), 2) The Strabismus, Amblyopia and Refractive Error in Singaporean Children (STARS), and 3) The Growing Up in Singapore Towards healthy Outcomes (GUSTO). Published estimates for myopia prevalence from 5 adult studies in Singapore were reviewed. Secular trends in the prevalence of myopia were correlated with changes in the education system. **Results:** The prevalence of parental myopia in SCORM (n = 2943), STARS (n = 4938), and GUSTO (n = 1072) was 47.8%, 53.4%, and 73.4%, respectively; corresponding calendar years these parents might have started schooling were 1966, 1973, and 1983 (born in 1960, 1967, and 1977), respectively. Mean age of parents was 41.3, 40.1, and 33.4 years, respectively. Prevalence of myopia in adult studies in persons who started elementary school in 1928, 1934, 1938, 1939, 1942, 1948, 1952, 1958, 1962, 1972, 1982, and 1995 were 36.4%, 39.7%, 30.0%, 31.5%, 33.0%, 26.4%, 32.5%, 48.7%, 39.4%, 52.0%, 82.2%, and 85.9%, respectively. **Conclusion:** During the past few decades, the prevalence of myopia increased rapidly, especially in persons who started elementary school after the 1980s (born after 1970). The education system was expanded after Singapore's independence in 1965, and the new education system was introduced in 1978. These changes, together with increasing intensive schooling, may have contributed to the increase in myopia prevalence.

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**Key words:** Education, Refractive error, Secular trend

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