

# Changes of the ocular refraction among freshmen in National Taiwan University between 1988 and 2005

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摘要

## Abstract

**Purpose** The prevalence of myopia in Taiwan has been reported to be increasing in the sequential nationwide survey. The purpose of this study is to compare the change of ocular refraction among freshmen in 1988 and 2005 in National Taiwan University.

**Methods** The refractive status of freshmen in National Taiwan University in 2005 was examined. The refractive status and corneal radius of each student were measured with autorefractometer. The data was compared with the data obtained in 1988. All the refractions of the right eye were chosen and myopia was defined as a mean spherical equivalent of  $-0.25$  D or more.

**Results** The mean refractive status of total 4686 freshmen was  $-4.25 \pm 2.74$  D in 1988 ( $-4.12 \pm 2.72$  D for males and  $-4.41 \pm 2.75$  D for females). The prevalence of myopia was 91.3% (90.1% for males and 92.8% for females). The prevalence of high myopia (over  $-6.0$  D) was 23.5% (22.2% for males and 25.1% for females). In 2005, the mean refractive status of total 3709 freshmen was  $-4.93 \pm 2.82$  D ( $-4.93 \pm 2.83$  D for males and  $-4.93 \pm 2.80$  D for females). The prevalence of myopia was 95.9% (95.9% for males and 95.9% for females). The prevalence of high myopia was 38.4% (38.1% for males and 38.8% for females).

**Conclusions** The prevalence and severity of myopia in freshmen of National Taiwan University increased significantly in 2005 compared to 1988. The distribution of refractive status in different college changed also. These findings may be explained by the early onset of myopia.