

# **Academic achievement of twins and singletons in early adulthood: Taiwanese cohort study**

吳銘斌

**Meng-Ting Tsou;Meng-Wen Tsou;Ming-Ping**

**Wu;Jin-Tan Liu**

摘要

## **Abstract**

**OBJECTIVES:** To examine the long term effects of low birth weight on academic achievements in twins and singletons and to determine whether the academic achievement of twins in early adulthood is inferior to that of singletons. **DESIGN:** Cohort study. **SETTING:** Taiwanese nationwide register of academic outcome. **PARTICIPANTS:** A cohort of 218 972 singletons and 1687 twins born in Taiwan, 1983-5. **MAIN OUTCOME MEASURE:** College attendance and test scores in the college joint entrance examinations. **RESULTS:** After adjustment for birth weight, gestational age, birth order, and sex and the sociodemographic characteristics of the parents, twins were found to have significantly lower mean test scores than singletons in Chinese, mathematics, and natural science, as well as a 2.2% lower probability of attending college. Low birthweight twins had an 8.5% lower probability of college attendance than normal weight twins, while low birthweight singletons had only a 3.2% lower probability. The negative effects of low birth weight on the test scores in English and mathematics were substantially greater for twins than for singletons. The twin pair analysis showed that the association between birth weight and academic achievement scores, which existed for opposite sex twin pairs, was not discernible for same sex twin pairs, indicating that birth weight might partly reflect other underlying genetic variations. **CONCLUSIONS:** These data support the proposition that twins perform less well academically than singletons. Low birth weight has a negative association with subsequent academic achievement in early adulthood, with the effect being stronger for twins than for singletons. The association between birth weight and academic performance might be partly attributable to genetic factors.

