

We investigate the causal effect of college education on smoking and sleep behavior using a mismatch between the firehorse year and Japanese school year. People believe women born in the firehorse year, 1966, are particularly dominating and will shorten their husbands' lives. Consequently, people avoid having children that year, leading an abnormal decline in birthrate. Since Japanese school year begins at April of every year, a mismatch occurs for the Firehorse year. That is, individuals born between January and March of 1967 are sorted into the Firehorse school year but does not experience selection of the Firehorse year. Leveraging this mismatch as an instrument, the mismatched group experience a higher college enrollment due to a peer-reduction effect of the Firehorse year. Using 2010 to 2016 Comprehensive Survey of Living Conditions, we find one additional year of college education reduces the probability of being an ever smoker by 12.0 percentage points and the probability of being a current smoker by 10.4 percentage points. We do not find any effect of college education on sleeping behavior. We further stratified the analysis by gender and find the effect to be significant on men, not women.

*Keywords:* college education; smoking; sleeping; instrumental variable approach; superstition