

## **Objective**

Sleep duration is increasingly recognized as a critical determinant of human health, exerting profound effects on various physiological processes. Despite its significance, there remains a dearth of empirical research investigating the relationship between sleep patterns and health outcomes within the working population, particularly in the context of Taiwanese laborers. This study endeavors to address the research gap by examining the associations between inadequate sleep and adverse health conditions, encompassing cardiovascular, mental, immunological, and metabolic disorders among Taiwanese laborers.

## **Methods**

Data for this comprehensive study were meticulously collected from January 2019 to December 2020. The study cohort comprised 29,928 eligible participants. Gender disparities in potential clinical risk factors were rigorously assessed through statistical analyses employing the Student's t-test. According to the US CDC, the Chi-Square (Fisher's exact test) was employed to scrutinize the relationship between regular physical examinations and the prevalence of standard sleep patterns.

## **Results**

Our results illuminate a compelling and statistically significant association between abbreviated sleep duration and multiple facets of physical health in Taiwanese laborers. Notably, a substantial proportion of the study population, precisely 11,935 individuals, constituting 50.38% of the sample, reported insufficient sleep. Individuals experiencing insufficient sleep present abnormalities in Body Mass Index (BMI), systolic and diastolic blood pressure, white blood cell count, triglyceride levels, LDL cholesterol, and AC glucose.

## **Conclusion**

Our study underscores sleep duration's profound and multifaceted impact on diverse physical health indicators. To the best of our knowledge, this is the first report demonstrating that inadequate sleep duration is intricately linked to adverse health effects in Taiwanese laborers. In light of these results, healthcare professionals are encouraged to counsel laborers on adopting healthier sleep patterns as a preventive measure to mitigate associated health risks.

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