

# Risk of hospitalization in patients with depression association with sociodemographic status: a retrospective cohort study in Taiwan

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## Background

Depression is a major public health problem, the incidence of which is increasing and can lead to various physical and emotional problems. The hospitalization risk in patients with depression associated with socioeconomic status (SES) deserves study using large population data. We used insurance claims data of Taiwan to assess the depression incidence and evaluate the risk of hospitalization for depression and other causes.

## Methods

This retrospective study collected data from the Taiwan National Health Insurance Research Database 2000–2018 of depression patients. We used the real world population data to estimate the sex specific annual incidence of depression in Taiwan. Females to males incidence rate ratios were calculated by SES. Nested case-control analysis was further applied to estimate the hospitalization risk for the depression cohort and compared between those hospitalized for depression and for other causes by SES.

## Result

We identified more men than women with depression (9,429,560 versus 9,158,783) newly diagnosed in 2000-2018. Females constantly had higher depression incidence than males both in decreasing trends annually. The depression incidence increased with age and the overall incidence was 1.5 greater for females. But, the hospitalization risk in the depression cohort was higher for male patients with an adjusted odd ratio (aOR) of 1.42 (95% CI=1.42, 95% CI=1.41-1.43) compared to females, and higher for patients of 18-29 years old and the elderly. Males were more likely than females to be hospitalized for depression than for other causes (aOR=1.66, 95% CI=1.63-1.69), with the risk decreased sharply with age with an aOR of 10.7 (95% CI=10.3-11.1) for patients of 18-29 years old compared with those aged 75+ years. The Kaplan-Meier method estimated cumulative hospital admission rates rose sharply in the first 2 years post the diagnoses of depression in both sexes, and higher for the association with other causes than with depression.

## Conclusion

The risk of developing depression is greater for women than for men and increased with age. However, intervention for reducing hospitalization in depression patients may need to put greater efforts for males and younger ones.

## Key Words

Depression, hospitalization, retrospective cohort study, socioeconomic status



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