

Prevalence of Metabolic Syndrome in Chinese Population: A Meta-Analysis

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Background

- Metabolic syndrome is one of the **most important risk factors** associated with **diabetes, cardiovascular disease**, and all-cause mortality. **Few studies** have examined its sex-specific prevalence in China across time.
- Aim: compare the prevalence and temporal trends of **metabolic syndrome in Chinese women and men**.



Methods

A PRISMA-compliant search in **MEDLINE** and **Embase** for epidemiological studies that reported metabolic syndrome prevalence in Chinese individuals were conducted, individuals aged 15 years and older and a random effect model was used to estimate prevalence and 95% CI.

- Binomial distribution** and **Freeman-Tukey double arcsine transformation** were modelled within-study variability to stabilise the variances.
- The **subgroup analyses** by sex, age, region, and screening period were done.

Results

Figure 1. Selection of articles for systematic review

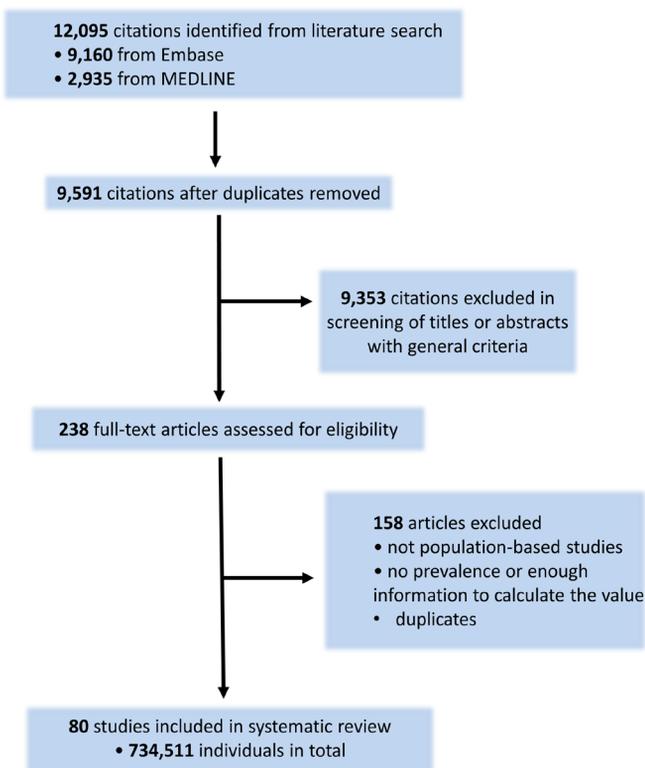


Figure 2. Prevalence of metabolic syndrome in Mainland China

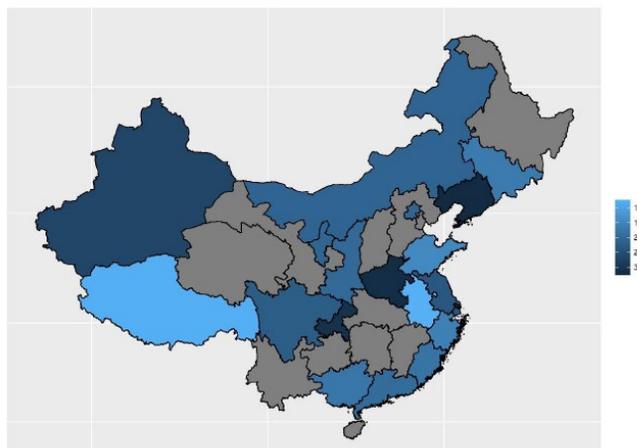
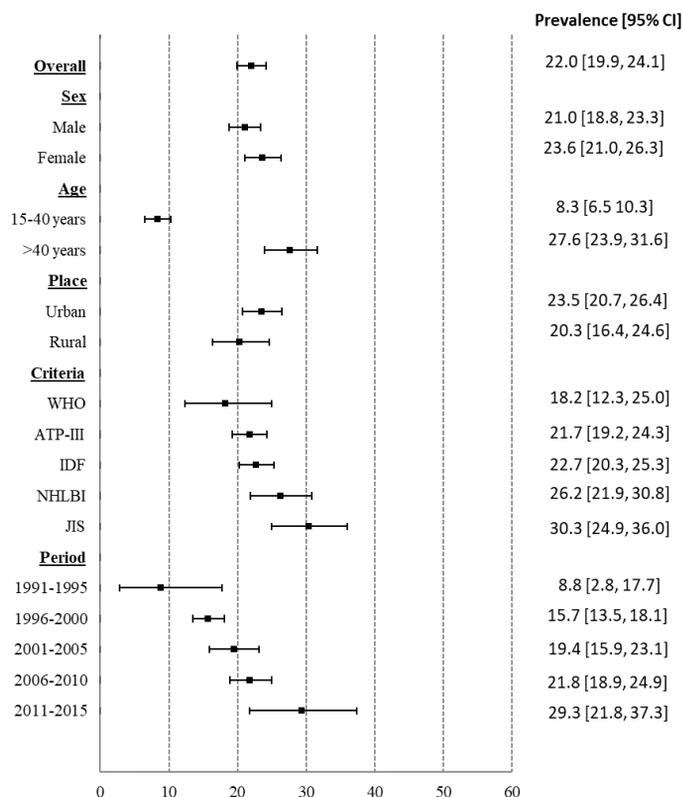


Figure 3. Prevalence of metabolic syndrome by subgroup



- The prevalence of metabolic syndrome in China was 22.0% (95% CI 19.9–24.1). Its prevalence was higher in **women** (23.6%, 21.0–26.3) than in **men** (21.0%, 18.8–23.3), in **urban** (23.5%, 20.7–26.0) than in rural regions (20.3%, 16.4–24.6), and in people older than 40 years (27.6%, 23.9–31.6) than in those aged 15–40 years (8.3%, 6.5–10.3).
- From 1991–1995 to 2011–2015, prevalence of metabolic syndrome **rose rapidly** from 8.8% (2.8–17.7) to 29.3% (21.8–37.3), with **a greater rise in women** (from 7.9% to 30.7%) than in men (9.4% to 27.2%).

Conclusions

- It is found that a **rapid increase** in the prevalence of metabolic syndrome in **Chinese women**.
- These findings suggest that more **targeted lifestyle intervention** and **early screening programmes** should be implemented for women in China.

Acknowledgments

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