

## INTRODUCTION

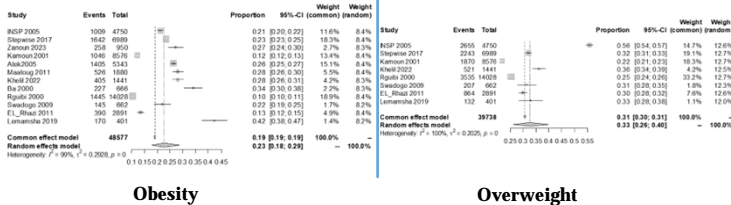
Obesity has become a major global public health issue. The rising prevalence of obesity is alarming. This concerning increase in obesity and overweight rates has detrimental consequences for both individual and public health. Obesity represents a significant economic burden on individuals, households, and health systems worldwide.

A meta-analysis on the prevalence of obesity and overweight in the Maghreb countries is therefore of particular importance. It will not only address a significant gap in the scientific literature but also provide information for clinicians, researchers, and public health policymakers. By understanding the scope of this phenomenon in the region, it will be possible to develop appropriate intervention strategies. The aim of this study was to conduct a systematic review/meta-analysis on the prevalence of obesity and overweight in the Maghreb countries.

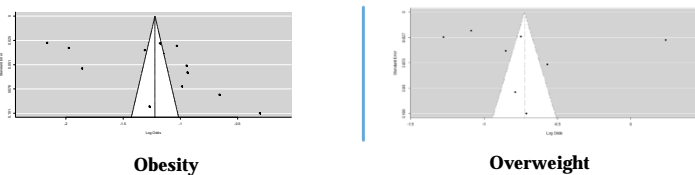
## RESULTS

In total, 12 studies aimed at assessing the prevalence of obesity and overweight in Maghreb countries were selected for this systematic review and meta-analysis. Of these, only 8 studies included data on overweight prevalence.

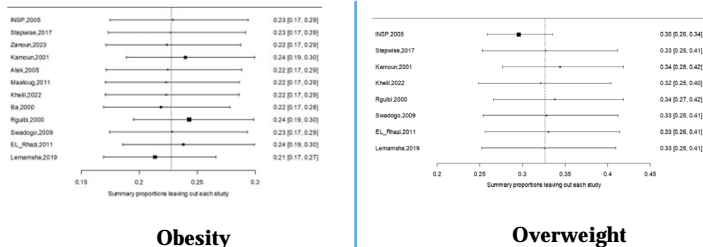
### • Forest plot of studies on the prevalence :



### • Funnel plot of studies on the prevalence :



### • Influence of excluding studies on the combined prevalence :



## METHODS

This SR included observational studies focusing on the prevalence of overweight and obesity in adults, covering all scientific publications available in English or French up to May 25, 2024. A systematic search was conducted on Medline via PubMed using a specific search equation, complemented by searches on Scopus and Google Scholar. Abstracts with relevant information on overweight and obesity prevalence in Maghreb countries were screened, with eligibility independently assessed by two reviewers, and any disagreements resolved by consensus. A meta-analysis was conducted using the "Metafor" function in the "Meta" package of R, with a funnel plot used to examine potential heterogeneity. A sensitivity analysis assessed result robustness by sequentially excluding studies to identify the impact of individual studies on the combined prevalence estimate.

## DISCUSSION

- Obesity increases the risk of numerous chronic diseases, including cardiovascular disease, type 2 diabetes, hypertension, and certain cancers, along with respiratory, musculoskeletal, and mental health complications.
- Global prevalence of obesity has risen in recent years, with the Maghreb region experiencing similar trends due to dietary changes, urbanization, and sedentary lifestyles.
- This study addressed the lack of comprehensive data on obesity and overweight prevalence in the Maghreb.
- BMI was used to define obesity (BMI  $\geq 30$  kg/m<sup>2</sup>) and overweight (BMI 25–29.9 kg/m<sup>2</sup>).
- Findings showed a combined obesity prevalence of 23% and overweight prevalence of 33% in the region.
- Obesity prevalence was higher in women than men, consistent with findings from the Middle East and Spain but different from Turkey.
- Algeria and Tunisia show rising obesity rates, unlike certain regions where rates have stabilized due to preventive health policies.
- Despite some limitations, such as unequal study representation by country, this meta-analysis—the first in the Maghreb—provides essential insights for targeted obesity interventions.

## CONCLUSION

This research emphasizes the urgency of combating obesity in the Maghreb through awareness campaigns on health risks, targeted programs for balanced nutrition and physical activity, strengthened health systems with trained professionals, and scientific research to adapt interventions. These actions aim to promote healthier lifestyles and improve public health outcomes in the region.

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