

## Introduction

- The obesity epidemic is recognized by the World Health Organization as a public health problem.
- The conditions are caused by excessive fat in the body which results in high risk for several diseases, like cancer, diabetes, or heart disease, that in turn are primary drivers of health care spending.

## Purpose

- This study aimed to assess the current published literature on clinical and economic burden associated with obesity in low- and middle-income countries (LMICs).

## Methods

- A systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines was performed.
- CINAHL, MEDLINE, PubMed, Web of Science and Scopus databases were systematically searched for studies published from inception to October 17, 2023.
- Costs of illness for all included studies were converted to 2023 United States (US) dollars, using country-specific gross domestic product inflators. Conversion to US dollars was based on purchasing power parities (PPP).
- Quality assessment of all included studies was performed using Newcastle-Ottawa quality assessment scale.

## Results

- Of the total 676 studies identified, five studies reported prevalence-based estimate, four studies based on survey and the remaining three studies presented model based.
- These studies published data from Brazil, Ghana, China, South Africa, Mexico, and Thailand. Out of the 12 studies, three studies reported the indirect costs.
- Methodological quality was deemed moderate.
- The annual direct and indirect costs associated with obesity for a population in LMICs ranged from USD 0.2 billion to USD 12.56 billion and USD 223 million to USD 227.5 million, respectively.
- Hospitalisation was the main cost driver in five of the included studies.
- Average length of stay (days) for obesity-related diseases in Brazil for men and women 7.9 and 6.8.

## Conclusions

- There was a considerable clinical and economic burden of obesity on individuals and the healthcare systems and may require appropriate prevention and management strategies.
- However, the included studies employ varied approaches and many of them have methodological shortcomings. Thus, future studies should consider adopting standardised cost of illness methodology.

## Reference

- Finkelstein EA, Khavjou OA, Thompson H, et al. Obesity and severe obesity forecasts through 2030. Am J Prev Med 2012;42:563–70.
- Cois A, Day C. Obesity trends and risk factors in the South African adult population. BMC Obesity 2015;2:1–10.

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