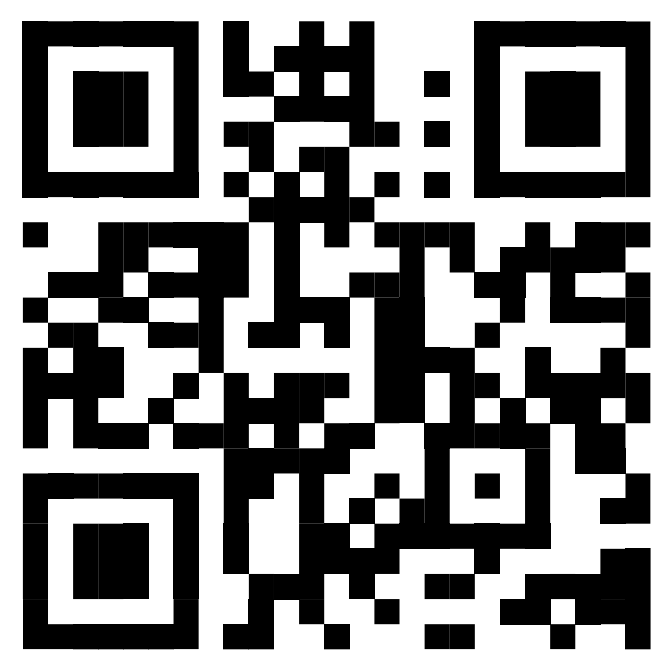


Clinical, Economic, and Humanistic Burden of Atherosclerotic Cardiovascular Disease (ASCVD) and Familial Hypercholesterolemia (FH) in Latin America: A Scoping Review (SR)



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INTRODUCTION

- Atherosclerotic cardiovascular disease (ASCVD) can be defined as coronary heart disease (CHD), cerebrovascular disease, or peripheral arterial disease, which have atherosclerosis as one of the main underlying pathological processes. ⁽¹⁾
- Familial hypercholesterolemia (FH), an inherited defect in the metabolic process of LDL-cholesterol, also contributes atherosclerotic plaques, leading to a significantly higher-than normal risk of ASCVD. ⁽²⁾
- ASCVD and FH contributes to important proportion of mortality due to cardiovascular diseases (CVDs) in Latin America. ⁽³⁾

METHODS

- This review was carried out on Medline and EMBASE databases without language restrictions, but considering articles published between 2000 and 2020. Studies were included that dealt with the clinical, economic or humanistic impact of patients with ASCVD or FH in Latin America.
- This review was registered on Open Science Framework (OSF) and your identifier is DOI 10.17605/OSF.IO/VKXPE

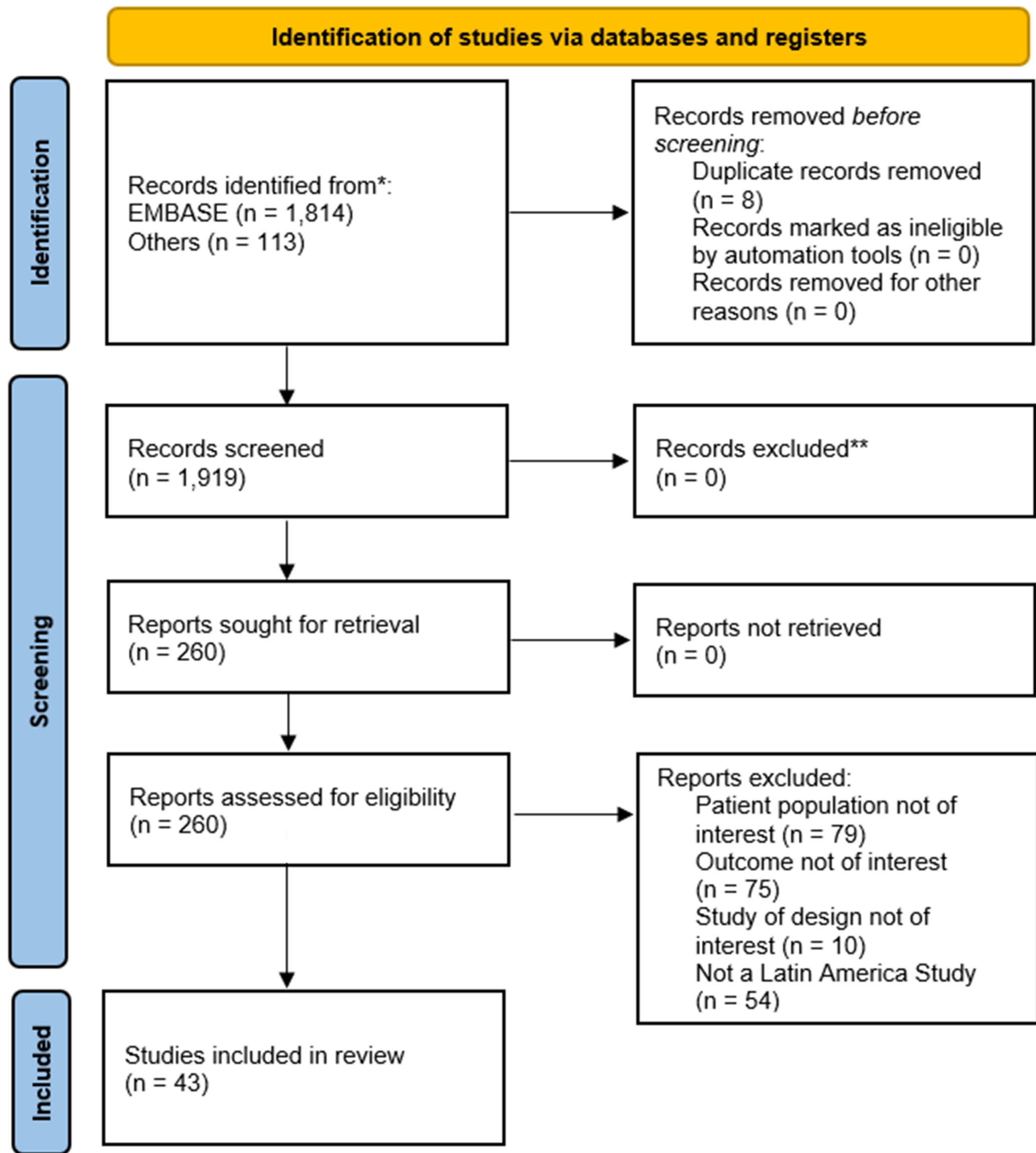
OBJECTIVE

- This SR was conducted to integrate all three aspects of clinical, economic, and humanistic burden of ASCVD and/or FH in Latin America.

RESULTS

- The literature search yielded 1,814 citations from the literature database and 113 citations from the local databases from the country affiliates. Therefore, in total, 1,927 citations were retrieved. Following the title/abstract screening, 260 potentially relevant or unclear references were identified. Full-text reports of these citations were obtained for more detailed evaluation. Following a detailed examination of the 260 citations, 218 publications were excluded, and 42 publications (26 from literature database search and 16 from local databases) were included in this SLR. Furthermore, the bibliographic searching identified 1 publication. In total, 43 publications were included in this SLR (Fig 1).

Figure 1- PRISMA flow chart



- A total of 43 studies were included. The publications showed high clinical burden of all-cause mortality and CV-mortality in ASCVD patients from both short term (≤ 1 year) and long-term follow-up (> 1 year).
- Economically, ASCVD poses substantial burden by reducing the individual and household income and, also showed that the total cost of CVD is steadily increasing from 2010 to 2015, accounting to nearly 1% of GDP in Brazil.
- Stroke patients showed thrice the hospitalization cost (US \$3,434) as compared to MI patients (US \$1,145). Quality of life also tends to reduce with cardiovascular events, especially in females, who reported poorer QoL than males.
- Majority of the identified publications included ASCVD patients, while there is limited evidence for FH patients. Evidence identified was largely based in Brazil and Argentina, but includes publications from Colombia, Mexico and Peru.

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CONCLUSIONS

- This review shows substantial clinical, economical and humanistic burden of ASCVD and FH patients in Latin America, while it highlights the existing limitations and gaps, such as lack of quality reporting, sparse evidence on FH patients and from low-income countries
- This study is the first review with focus in the Latin America considering the main aspects relationship with the burden of cardiovascular disease in some countries in this area.