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CONFERENCE ABSTRACT

Lack of social health determinants on risk prediction tools for cardiovascular disease: A systematic review of systematic reviews.

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Introduction

Cardiovascular diseases (CVD) are common non-communicable diseases (1). There are several CVD risk-assessment tools, but these tools require adaptation and validation to other contexts than they were developed (2). CVD risk assessment is part of routine clinical care, but there is no clear information about the estimation of the benefits of each one of the risk-assessment tools over others. CVDs are closely related to social determinants (SD) –"circumstances in which people are born, grow, live, work, and the systems put in place to deal with illnesses"" (3–5)– and there is a need to consider those determinants into the CVD risk assessment (6). Objectives: (i) to identify systematic reviews (SR) about comparisons of CVD risk prediction tools, in terms of discrimination, calibration, and reclassification performance; and (ii) to assess if any of the risk prediction tools, from those SR, uses SD as predictor variables.

Theory/Methods

We performed a systematic review of SR, including: (i) SR with or without meta-analysis that analyse CVD risk scales, (ii) studies including participants >19 years old, (iii) studies that evaluated CVD development and mortality and hospitalizations and emergencies due to CVD, (iv) studies published in English or Spanish, and (v) studies published in the last 10 years. Medline, Cochrane Database and LILACS were used. After a first screening for relevance, two independent reviewers screened the included studies in full text, a third reviewer settled discrepancies. Finally, we analyzed if any of the CVD risk assessment tools of the included studies used SD as predictors.

Results

3929 articles were identified, 16 articles were retrieved from gray literature; 3737 articles were excluded, leaving 10 SR to extract data from the full text. Two SR were included in our final review. The quality of the two reviews was moderate according to AMSTAR-2. We found that only one of the SR (7) developed non-conclusive pairwise comparisons between two different risk scores at a time. There were no tools that used SD as predictor variables.

Discussion

Fully integrated care deployment requires accurate, holistic, and scalable CVD risk assessment tools.

Conclusions

There is not enough scientific evidence to allow us to choose a CVD risk prediction tool over others, in terms of discrimination, calibration, and reclassification of performance. Also, SD are not included in the risk assessment tools.

Lessons learned

Programmes to provide integrated care of cardiovascular prevention and treatment have been developed (8). Unfortunately, CVD risk assessment, considering care pathways to socially risk patients (poor working conditions, illiteracy, etc.) when CVD risk is also present, remains as a gap.

Limitations

We limited our search to those sources that we have access to. There is the possibility of publication bias; maybe, studies that do not show promising results of a specific CVD risk assessment tool when comparing with others have not being published.

Suggestions for future research

It is necessary to evaluate the differences or similarities among CVD risk prediction tools to reach a consensus regarding the most promising scores. Researchers should test social determinants as predictors of CVD (9).