

Title: Prevalence of cardiovascular diseases in the Middle East: Systemic review and meta-analysis

Category: Prevention

Abstract

Background: Cardiovascular diseases are the leading cause of mortality in the world and CVDs are responsible for 34% of all deaths in the middle east population. To better understanding of the current CVD prevalence in the middle east population we conducted this systematic review and meta-analysis.

Aim: To assess the prevalence and risk factors of CVD among middle east adult population from the published literature.

Methods: Electronic data basis such as PubMed, Sciencedirect, Embase and Google scholar were searched, from the year 2011 to December 2018. All the original articles published in English and have investigated the prevalence of CVD and risk factors. Study characteristics, participants demographics and risk factors of CVD were recorded. To pull the CVD prevalence, we used random effect meta-analysis. we assess heterogeneity using both the formal tests and subgroup analysis. We also assessed the quality of the studies and examined the publication bias.

Results: We retrieved 2931 potentially relevant papers through searches of electronic and gray literatures, of which 44 articles met inclusion criteria after the screening and were included in systematic review and meta-analysis (N=191,979). The weighted pooled prevalence of CVD was 13.5% (95%CI:11.1%-15.8%) in the Middle East. The prevalence of cardiovascular disease risk factors such as dyslipidemia accounts 42.2% (95% CI: 19.9%-64.4%), diabetes mellitus 28.1%, 95% CI: 14.6%-41.5%), hypertension 27.5% (95% CI: 22.5%-32.5%). Other traditional CVD risk factors, smoking 16.2% (95% CI: 11.9%-20.9%), and family history of CVDs 18.7% (95% CI: 16.5%-21.0%).

Conclusion: The burden of CVD is higher (13.4%) in the Middle East region than the global burden (4%). There is a double burden of dyslipidemia (42.2%) in this region than other CVD risk factors; diabetes (28.1%) and hypertension (23.1%) in this region. Interventional strategies are urgently required for primary prevention of CVD and its associated risk factors in Middle East population.

Acknowledgement: PROSPERO 2019 CRD42019119898