

Title: Risk factors of erectile dysfunction among diabetes patients in Africa: A systematic review and meta-analysis

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Abstract

Background: Erectile dysfunction in men is a common underestimated complication of diabetes mellitus, which is becoming a significant public health problem both in developing and developed countries. Erectile dysfunction threatens the well-being of clients, hence determining its risk factors and controlling it at an early stage is vital to preventing serious consequences and the burden of the disease. Therefore, this study aimed to systematically evaluate erectile dysfunction risk factors in patients with diabetes mellitus in Africa.

Methods: PubMed, Web of Science, Scopus, African Journals Online, Wiley Online Library and Google Scholar were searched and complemented by manual searches. Egger's regression test was used to determine publication bias. The I^2 statistic was used to check heterogeneity between the studies. DerSimonian and Laird random-effects model was applied to estimate pooled effect size, odds ratios, and 95% confidence interval across studies. STATA version 14 statistical software was used for the meta-analysis.

Result: Overall, 17 studies with 6002 study participants were included to identify risk factors of erectile dysfunction among diabetic patients. Duration of diabetes mellitus >10 years (AOR = 2.63; 95% CI 1.27, 5.43), age >40 years (AOR = 1.24; 95% CI: 1.03, 1.51), peripheral neuropathy (AOR = 2.34; 95% CI: 1.51, 10.72), no physical exercise (AOR = 1.63; 95% CI: 1.49, 1.78), testosterone level <8 nmol/l (AOR = 2.83; 95% CI: 1.06, 12.86), and peripheral vascular disease (AOR = 2.85, 95% CI: 1.54-5.27) were significantly associated with erectile dysfunction among diabetic patients.

Conclusions: This study found that long duration of diabetes mellitus, age >40 years, testosterone deficiency, peripheral neuropathy, not involved in physical exercise, peripheral vascular disease, were significantly associated with increased risk of erectile dysfunction among diabetic patients. Therefore, situation-based interventions and country context-specific preventive strategies should be developed to decrease the risk factors of erectile dysfunction among patients with diabetes mellitus.

Keywords: AOR, adjusted odds ratio; Africa; CI, confidence interval; DM, diabetes mellitus; Diabetes mellitus; ED, erectile dysfunction; Erectile dysfunction; Impotence; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses; Sexual dysfunction.

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