THE 11TH APRU POPULATION AGING VIRTUAL CONFERENCE

"Challenges & Resilience Related to Aging Population: Surviving and Thriving towards Successful Aging"

7 - 8 April 2021

Certificate

Number: SERT-1183/UN2.F10.D/APRUAging/2021

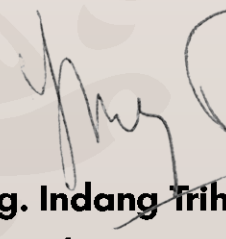Awarded to

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A Meta Analysis Study Of Risk Factors For Diabetes Mellitus In Indonesia

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ABSTRACT

Purpose

The aim of this study is to examine the risk factors of diabetes mellitus in Indonesia.

Background

Diabetes mellitus is a serious public health issue especially in Indonesia. The Indonesian prevalence of diabetes is steadily increasing and leads Indonesia to have seventh largest number of diabetic patients. Several studies have indicated numerous risk factors for diabetes, nevertheless the results are obtained diverse.

Methods

This study is a quantitative study using meta-analysis method. The databases used to search for literature included Google Scholar, PubMed, DOAJ, Garuda, and ISJD published between 2000 until 2020. The risk factors analyzed was obesity, central obesity, and physical activity. This study was performed using RevMan version 5.3 to obtain combined effect (pooled odds ratio) and heterogenity was measured by I^2 statistic.

Results

Of the 2,957 studies was screened, 41 studies were included into systematic review and only 15 studies met the eligibility criteria included to meta-analysis. The result showed a statistically significant association for all variables with the strongest risk factor for diabetes is physical activity (OR 3.21, 95% CI 2.25-4.60), then central obesity (OR 2.90, 95% CI 2.09-4.04), and obesity (OR 2.43, 95% CI 1.17-5.04).

Conclusion

Physical activity, central obesity, and obesity were modifiable risk factors of diabetes mellitus in Indonesia. People need to take care of nutritional status by maintain either body weight or waist circumference with healthy lifestyle and having adequate physical activity to help reduce the risk of diabetes mellitus.

Keywords : Diabetes mellitus, physical activity, obesity, meta analysis