Abstract 17

Prevalence of type 2 diabetes mellitus and associated risk factors among middle-aged adults in a workplace setting

Vaishnavi D[1], Ramanan S[1], Kanchana KLN[1], Sakiththia S[1,] Rijina ARF [1] Surenthirakumaran R[2], Aravinthan M[3]

[1]*Faculty of Medicine, University of Jaffna*
[2]*Department of Community and Family Medicine, Faculty of Medicine, University of Jaffna*
[3]*Teaching Hospital, Jaffna*

Background and objective: Diabetes mellitus is a growing global health concern, contributing significantly to morbidity and mortality. The rising prevalence, particularly among middle-aged individuals, highlights the need for early detection and intervention. This study aimed to determine the prevalence of type 2 diabetes mellitus and associated risk factors (physical inactivity, unhealthy diet, overweight and high blood pressure) among middle-aged adults in a workplace setting.

Methods: This community-based, descriptive, cross-sectional study included 178 middle-aged staff in Divisional Secretariat Office Nallur. Data were collected using structured, self-administered questionnaires. Sample size was calculated based on Rannan-Eliya et al. (2023), with an estimate of 176. Data were analyzed using SPSS, and the chi-square test was used to assess associations between diabetes status and selected risk factors with a significance level of $p < 0.05$.

Results: Among 178 participants, 11.8% were diabetic and 38.8% were pre-diabetic. Physical inactivity was common (66.3% at moderate/high risk), but no significant association was found ($p = 0.453$). Similarly high-risk dietary group (46.6%) showed no association with diabetes status ($p = 0.566$). Blood pressure was elevated in 46.6% of participants but also showed no significant association ($p = 0.870$). BMI showed a notable association with diabetes prevalence, which increased from 6.8% in normal BMI to 12.5% in overweight and 22.6% in obese participants. Pre-diabetes was most common in the obese group (45.2%), indicating a borderline association between higher BMI and pre-diabetes/diabetes ($p = 0.080$).

Conclusion: Unhealthy dietary habits, physical inactivity, elevated blood pressure, diabetes, and pre-diabetic conditions were common among participants. The study could not explain the associations of these factors with diabetes. These findings highlight the need for targeted, evidence-based workplace interventions.

Keywords: diabetes mellitus type 2, risk factors, prediabetes, obesity, elevated blood pressure