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## **Predictive power of Fat Mass Index, Visceral Adiposity Index, and Body Shape Index in presence of Type 2 Diabetes Mellitus**

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Obesity and fat mass accumulation are the main culprits in metabolic disorders and insulin resistance, which predispose to diabetes and metabolic syndrome. Recent studies have proposed tools such as anthropometric indices to predict diabetes. In this study, we examined the FMI (Fat Mass Index), VAI (Visceral Adiposity Index) and ABSI (A Body Shape Index) which are related to fat mass and its distribution in the body, in incidence of type 2 diabetes (T2D).

This study is a cross-sectional study that used RaNCD cohort data. The RaNCD study is a prospective population-based study that has been conducted to evaluate chronic diseases in Ravensar since 2014 on 10051 adults age 35-65 years. The area under the receiver operating characteristics (ROC) curves (AUC) was calculated to compare the discriminative power of anthropometric variables for incident T2D. Also, the cut-off points of each index were calculated through the ROC curve analysis.

According to our findings, all indices except ABSI had a significant relationship with the incidence of T2D. FMI in men (OR, 1.13; 95% CI, 1.09-1.18) And VAI in women (OR, 1.10; 95% CI, 1.07-1.12) had the highest association with incident of T2D. the, Results of ROC curve analysis showed that VAI had the largest area under the curve (0.67), and ABSI had the lowest area (0.53). Also cut-off points for FMI and VAI were 7.5 and 4.82 in men and 11.7 and 5.10 in women, respectively.

Identification of diabetes risk factors can help to prevent this chronic disease. We suggested that VAI and FMI can be a good predictor of T2D incidence in comparison with other conventional indices.

### **Biography**

Mehnoosh Samadi has completed PhD at the age of 32 years from Ahvaz Jundishapur University of medical sciences. She is the assistant professor of Nutritional science department in School of Nutritional Science and Food Technology of Kermanshah University of Medical Sciences, Iran. She has published many papers in reputed journals and has been serving as an editorial board member of reputed.

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