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Higher Employment Rates and Years of Education Correlate with the Prevalence of Chronic Kidney Disease due to Diabetes Mellitus in Indonesia.

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Objectives:

The contribution of the sociodemography factor (SD) to the prevalence of chronic kidney disease due to type I diabetes mellitus (CKD DMI) and chronic kidney disease due to type II diabetes mellitus (CKD DMII) is still unknown. We investigated the correlation between SD and the prevalence of CKD-DMI and CKD-II.

Methods:

The CKD-DMI and CKD-DMII age-standardized prevalence rates were extracted from the Global Burden of Disease database, 2019. This study extracted SD from the Indonesian Population Census 2019 for the poverty rate (percentage of poor individuals), unemployment rate (percentage of unemployed individuals), gender ratio (percentage ratio of male to female), employment rate (percentage of employed individuals), and average number of education years (average number of completed years of education). The data was analyzed using the Shapiro-Wilk normality test, and the correlation between variables was estimated.

Results:

A total of 34 provinces were included in this study. The mean poverty rate was 6.525%, the unemployment rate was 4.728%, the male-to-female ratio was 1.032, the employment rate was 42.013%, and the average number of education years was 8.962. The mean prevalence of CKD-DMI was 55.27/100 thousand individuals, and CKD-DMII was 1860/100 thousand individuals. A correlation analysis using Spearman's test reveals a significant correlation between higher employment rates and a higher prevalence of CKD-DMII (R: 0.553; $p<0.01$). In addition, the higher the mean number of years of education, the greater the prevalence of CKD-DMII (R: 0.56; $p<0.01$).

Conclusions:

There is a correlation between the prevalence of chronic kidney disease due to type II diabetes and sociodemographic factors, specifically the employment rate and the mean number of years of education.

Table 1. Spearman’s correlation between variables