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Hypertension, Chronic Kidney Disease, Mental Health: A Large Cross-sectional Study

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Objectives : While many studies uncovered the association of hypertension and chronic kidney diseases (CKD), recent other studies enrich the insight where these two diseases have accelerative impact each other. Taking wider perspective, research in psychosomatics has found that there is a positive association between mental distress and chronic diseases. This study aims to analyze whether mental health has influence to the relationship between hypertension and chronic kidney disease.

Methods : This study uses secondary data from the Indonesian Family Life Survey (IFLS) wave 5. Using information from 29,411 adult respondents, analysis is conducted by employing logistic regression. Calculation of marginal effects and odds ratio are used to measure the magnitude of the influence. Analyses are conducted using two sub-samples: respondents with and without depressive symptoms. Technically, same econometric model is used for twice analyses with these different sub samples. To avoid bias, we also involve several covariates such as other chronic diseases existence and sociodemographic characteristics in household and individual levels.

Results : Firstly, regression is done using sub-sample of respondents without depressive symptoms. Results show that hypertensive individual are 2.14 times more likely to be diagnosed of CKD (95% confidence interval, 1.62–2.81). Next analysis is done using sub-sample of respondents with depressive symptoms. It provides surprising insight in which the hypertensive individual are 3.84 times more likely to be diagnosed of CKD (95% confidence interval, 2.48–5.96). Later analyses involving covariates present the consistent results with slightly different in the magnitude of odds ratio. While mentally healthy individuals with hypertension are 1.88 times more likely experiencing CKD, depressive and hypertensive individuals are 3.25 times more likely to experiencing CKD.

Conclusions : In conclusion, it is statically undeniable that hypertension has relationship with CKD. However, we need to take mental health into account since it has escalating effect to the relationship between these two chronic diseases.