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**The Association of Employment Status and Blood Pressure Dipping Patterns
in a Korean Cohort: Cardiovascular and Metabolic Diseases Etiology Research
Center – High Risk Study**

Sul A Lee¹, Hyung Woo Kim¹, Chang-Yun Yoon¹, Shin-Wook Kang¹, Hyeon Chang Kim³, Sungha Park², Tae-Hyun Yoo¹

¹Department of Internal Medicine - Nephrology, Yonsei University College of Medicine, Korea, Republic of

²Department of Internal Medicine-Cardiology, Yonsei University College of Medicine, Korea, Republic of

³Department of Preventive Medicine, Yonsei University College of Medicine, Korea, Republic of

Objectives: Cardiovascular disease (CVD) is prevalent in the general population, affecting majority of people over 60 years old. There are several well-established risk factors for CVD, and better control of these modifiable risk factors are very important to prevent further complications from CVD. Psychosocial status is one of the important modifiable risk factors and are getting more attention regarding its potential role in the early development and progression of CVD. Employment status can significantly affect the psychosocial status of each individual, and recent findings show that unemployment can adversely affect the incidence of CVD and its complication. However, the underlying mechanism of how employment status can affect cardiovascular outcome in patients with CVD are largely unknown.

Methods: Using a cohort study called, Cardiovascular and Metabolic Diseases Etiology Research Center – High Risk (CMERC–HI, NCT02003781), we investigated the association of employment status with the surrogate cardiovascular markers collected by 24-hour ambulatory blood pressure monitoring through multiple logistic regression analyses .

Results: Among the total of 1,915 participants, 449 (23.5%) were unemployed and 1,466 (76.5%) were employed. Unemployment group had higher frequency of reverse-dipping pattern compared to employment group [81 (18.0 %) vs. 167 (11.4 %), $P < 0.001$]. Multiple logistic regression showed significant association between unemployment status and reverse BP dipping pattern even after adjustment of multiple confounding factors (Odds ratio, 1.577; 95% CI, 1.124 – 2.202; $P = 0.008$).

Conclusions: Our study suggests that unemployment can adversely affect cardiovascular outcome by disrupting normal hemodynamic circadian rhythm.