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Prevalence and Factors Associated with Masked and White Coat Hypertension Among the Residents in Sri Jayewardenepura Kotte Municipality Area – A Cross Sectional Study

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Introduction: Masked hypertension (MH) and white coat hypertension (WCH) are clinically misdiagnosed as Sustained Normotension (SN) and Sustained Hypertension (SH), respectively, only relying on clinical BP values of the patients. This practice leads to overmedicate and under medicate the people suffering from WCH and MH respectively, triggering many clinical issues.

Objective: To analyze the prevalence and associated factors of WCH and MH among people who use public primary care facilities in Sri Jayewardenepura municipal area (SJMA).

Methods: Participants (102) were randomly selected from regular patients of The National Center for Primary Care and Allergy Research, Faculty of Medical Sciences, University of Sri Jayewardenepura, reside in SJMA. Data was collected using an investigator-administered questionnaire. Clinical BP and 24-hour ambulatory blood pressure (AMBP) were measured using a validated single mercury sphygmomanometer and AMBP monitoring devices, respectively. MH was defined as clinical <BP, 140/90 mmHg and daytime ambulatory BP >135/85 mmHg. WCH was defined as clinical BP >140/90 mmHg and daytime ambulatory BP <135/85 mmHg. A multinomial logistic regression was performed to identify the significant factors associated with WCH and MH.

Results: Among 102 patients, 80% were normotensive, 9.8% had WCH, 5.9% had MH, and 3.9% had SH. The majority (55.1%) was females. Mean age was 42.1 (± 15.7) years. WCH was significantly ($p < 0.05$) associated with older age, employment (occupied), presence of diabetes, marital status (married), less time expenditure for working, sleeping and physical activity and drug intake, compared to SN. MH was significantly ($p < 0.05$) associated with older age, employment (occupied), presence of diabetes, marital status (married), time expenditure for working, higher physical activity and drug intake, compared to SN.

Conclusions: Finding of the study suggest the use of AMBP monitoring on the current management of hypertension in terms of diagnosis and evaluation of BP control, considering the observed associations of MH and WCH in the study.

Keywords: Clinical BP, AMBP, Masked hypertension, White coat hypertension, Association