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### **Factors associated with antihypertensive medication adherence among diabetic patients with coexisting hypertension in Teaching Hospital Jaffna, Northern Sri Lanka.**

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**Introduction** Poor medication adherence is a known preventable factor which can adversely affect desired achievable blood pressure (BP) targets.

**Objective** This study aimed to assess the antihypertensive medication adherence among diabetic patients with coexisting hypertension

**Methodology** This cross-sectional study was done in the general medical clinics of Jaffna Teaching Hospital from October to November 2019 in patients having diabetes coexisting with hypertension. A single population proportion formula was used for sampling, assuming a proportion 10.5% from the previous study in the same setting. Patients who were pregnant age below eighteen, and mentally incompetent were excluded from the study. Medication adherence was measured by using the Modified Medication Adherence Self-Efficacy Scale (MASES). SPSS version 26.0 was used for analysis. Mean, standard deviation and median were used to describe medication adherence. The median value was used to categorise the anti-hypertensive medication adherence into optimal adherence and suboptimal adherence. Associations between medication adherence and socio-demographic and other factors were measured with the Chi square test. The relationship between blood pressure and modified MASES score was examined with Pearson's correlation analysis.

**Results** Out of 371 patients, two-thirds (66.6%) were female. Mean age of participants was  $60.93 \pm 9.77$  years. The total mean score for modified MASES was  $48.1 \pm 3.81$  and median was 49. A negative correlation was observed between MASES scores and systolic ( $r=-0.033$ ,  $P=0.415$ ) and diastolic ( $r = -0.083$ ,  $P < 0.05$ ) blood pressure. In the sample, 43.4% (95%CI 38.4-48.5) sub optimally adhered to antihypertensive medication. Among associated factors, female gender ( $p=0.007$ ), low-income ( $p=0.002$ ) and being employed ( $p=0.046$ ) showed a significant association with poor adherence. However, number of co-morbidities ( $p=0.33$ ), number of medications ( $P=0.45$ ), duration of hypertension ( $P=0.44$ ), and frequency of clinic visits ( $P=0.37$ ) were not significantly associated with anti-hypertensive medication adherence.

**Conclusion** These findings have implications for quality of care. A substantial proportion of patients recorded suboptimal adherence. Medical professionals should consider sociodemographic factors like gender, income, and employment when prescribing medication and take measures to improve adherence.