

## **ABSTRACT.**

**Background:** DPN impacts up to 50% of all diabetics worldwide. With an estimated worldwide prevalence of diabetes at 472 million by 2030, 50% of them are likely to be affected by DPN. DPN leads to diabetic foot and this results into a life-time risk of amputation of 15% that precedes amputation in 85% of the cases. It is necessary to identify, diagnose and manage DPN as early enough to avoid amputations and possible disabilities and to improve the quality of life of the diabetic patient. Regular comprehensive examination of the feet and patient education on good foot care practices can lessen the magnitude of foot ulcer by 50%, and also reduce amputations by up to 85%

**Objectives:** The objectives of the study were to determine the prevalence, patterns and factors associated with peripheral neuropathy among patients with diabetes attending diabetic clinic at MRRH

**Methods:** We conducted a cross-sectional study at the diabetic clinic of Mbarara Regional Referral Hospital from November 2023 to December 2023. We included patients with diabetes through consecutive sampling. We excluded patients who had Neurological history of myelopathies or radiculopathies and those who had eaten less than 8 hours ago.

Sociodemographic and clinical data were obtained through interviewer-administered questionnaires and physical examinations. Modified Poisson regression, with robust standard errors analysis was used to evaluate associations between DPN and independent variables.

**Results:** A total of 355 patients were enrolled with mean age  $55.94 \pm 13.43$  years. The majority of the participants were of female gender (60%). The prevalence of DPN was 135/355, 38.03% (95% CI 33.11 -43.21%). At multivariable analysis, having hypertension (aPR 2.73 95% CI (1.80-4.13)  $P < 0.001$ ), longer duration of diabetes of 6 years and above (aPR 2.01 95% CI (1.46-2.75),  $P < 0.001$ ) advanced age (aPR 1.49 95% CI (1.04-2.13),  $P < 0.001$ ) and  $FBS > 7 \text{ mmol/l}$  (aPR 1.96 95% CI (1.34-2.90),  $P < 0.001$ ) were independently associated with DPN.

**Conclusions:** Approximately 1 of every 3 patients with DM attending MRRH has DPN. These findings underscore the significant burden of DPN in this patient population.

Early detection and targeted risk lowering interventions, especially among patients with modifiable risk factors of hypertension and poor glucose control, are crucial in preventing or delaying the progression of DPN.