

## ***Exploring Variation in Smoking Pack Years Across Demographics and its Relationship with Blood Pressure***

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Sri Lanka, a multicultural and multiethnic nation, faces economic challenges and unequal resource distribution. Cultural and religious beliefs greatly influence health behaviours. Hypertension, a prevalent health issue, is significantly linked to smoking. Despite implementing international standards for blood pressure control, various demographic factors complicate achieving the health goal. This study aimed to assess differences in smoking habits across demographics—sex, religion, ethnicity, occupation, income, and education—and examined its association with systolic and diastolic blood pressure levels and blood pressure control. A cross-sectional descriptive study was conducted at the Teaching Hospital Peradeniya, a tertiary care hospital in Sri Lanka, from March 2020 to April 2024, involving 247 diagnosed hypertensive patients. Data collection utilised interviewer-administered questionnaires and clinically measured parameters. The smoking habit was measured in pack years. A one-way ANOVA test, linear regression, and binary logistic regression analyses were performed. 247 patients were analysed, with a mean age of 62.9±14.1 and 45.4% being female. The majority (87%) identified as Sinhala Buddhists. Housework dominated (35.6%), many had education below GCE-Ordinary Level (45.8%), and 9.35% had less than 10,000 Sri Lankan rupees in income. The mean pack year was 4.76. The one-way ANOVA showed significant differences in pack years between genders ( $p = 0.002$ ) and among occupations ( $p = 0.012$ ). The mean systolic and diastolic blood pressures were 139.6±21.7mmHg and 83.9±14.6mmHg, respectively. Regression analyses revealed no significant association between smoking pack-years and either systolic or diastolic blood pressure, nor with blood pressure control ( $p > 0.05$ ). In conclusion, there was a significant variation in packyears between genders and among occupations among patients attending Teaching Hospital Peradeniya, Sri Lanka. Interestingly, the study found no significant link between their pack years and blood pressure levels or control, suggesting that even former smokers can achieve adequate blood pressure control with standard management.

**Keywords:** Smoking Pack Years, Demographic Factors, Systolic Blood Pressure, Diastolic Blood Pressure, Blood Pressure Control