

## **Association between Nutritional Knowledge, Attitudes, and Practices of Food Labels and Cardiovascular Disease Risk, Based on Anthropometric and Physiologic Measurements (Body Mass Index, Waist Circumference, Systolic and Diastolic Blood Pressure) Among Undergraduates of University of Peradeniya**

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Cardiovascular diseases (CVD) are the main cause of death globally. Poor eating habits significantly increase the risk of CVD both in young adulthood and later in life. University students often develop poor dietary habits. One of the interventions to reduce CVD risk is adopting a healthy diet pattern from an early age. Information provided on food labels leads to healthier food choices among consumers. Hence, the study aims to assess the association between nutritional knowledge, attitudes, and practices of food labels and cardiovascular disease risk, based on anthropometric and physiologic risk factor measurements (BMI, Waist Circumference, Systolic and Diastolic Blood Pressure) among undergraduates of the University of Peradeniya. This study was a descriptive, cross-sectional, quantitative study conducted among 427 undergraduates from nine faculties of the University of Peradeniya in 2024. Data on socio-demographic profiles, nutritional knowledge, attitudes, and practices on food labels were collected using a pre-tested Google Form. Anthropometric data of participants were measured by standardised methodology, and blood pressure was measured using a digital sphygmomanometer. The collected data were analyzed using descriptive statistics and chi-square test using SPSS version 25. A p-value less than 0.05 was considered statistically significant. The mean age ( $\pm$  SD) of the study participants was 24 (24.22  $\pm$  1.748) years. The majority of participants (n = 254, 59.5%) were within the normal BMI range. Based on Waist Circumference (WC), female participants (n = 105, 24.6%) were at a higher risk of developing CVD than male participants (n = 6, 1.4%). The majority of participants had normal Systolic (SBP) and Diastolic Blood Pressure (DBP). There was a significant association between certain CVD risk factors, such as WC in females and SBP, with nutritional knowledge, attitudes, and practices of food labels ( $p < 0.05$ ). No significant association was found between BMI, and WC in males with nutritional knowledge, attitudes, and practices of food labels ( $p > 0.05$ ). Knowledge and attitudes of food labels showed a significant association with DBP ( $p < 0.05$ ), whereas practices of food label usage showed no significant association with DBP ( $p > 0.05$ ). These findings emphasise the gender-specific health education and suggest that improving nutritional knowledge and encouraging the proper use of food labels could help reduce CVD risk among young adults.

**Keywords:** Nutritional knowledge, attitudes, practices, food labels, cardiovascular diseases