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Baseline lifestyle and biomedical stroke risk factors among New Zealand participants in the PERsonalised Knowledge to reduce the risk of Stroke (PERKS-International) randomised controlled trial –preliminary results

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Stroke ranks as the world's second leading cause of death and third in causing disabilities, a preventable disease affecting people of all demographics. Primary prevention is crucial to mitigate its impact by addressing modifiable risk factors such as poor diet, low physical activity (PA), obesity, smoking, high blood pressure (BP), elevated cholesterol, and blood glucose levels. This study evaluated quality of diet and other stroke modifiable risk factors among New Zealand (NZ) participants recruited at the baseline phase of the PERKS-International trial. PERKS is a Phase III, multicentre, prospective, pragmatic, open-label, single-blinded endpoint, two-arm randomised controlled trial conducted across Australia and NZ⁽¹⁾. Participants aged >35 and ≤75 years with ≥2 modifiable risk factors for stroke were assessed using the Life's Simple 7 (LS7) score. LS7 includes seven components (BMI, BP, total cholesterol, blood glucose, dietary pattern, smoking, and PA) categorising into *ideal*, *intermediate*, and *poor* level. Height, weight, and BP were measured. Total cholesterol and blood glucose were measured via CardioChek PA Analyser. An online FFQ and Physical Activity Questionnaire were administered. Descriptive analyses and correlation coefficients were used to examine the characteristics of participants at the baseline. In NZ, out of 395 targeted participants, 375 (Female = 230, mean age = 57yrs) from diverse ethnic groups (NZ European = 204, Māori = 35, Pacific = 17) were recruited and assessed. Among LS7 metrics, smoking had the highest proportion of those in the *ideal* category (88%), followed by blood glucose (62%), total cholesterol (49%), dietary pattern (34%), BP (22%) and BMI (13%). Nearly 64% consumed <5 portions of fruits and vegetables per day. Almost half of the participants consumed beans and pulses less than once a week. About 43% and 31% consumed fibre-rich breakfast cereal and wholemeal bread less than once a week. Almost 10% drank fizzy drinks ≥4 times/week. Nearly 40% consumed sweets such as biscuits, cakes, and chocolate at least twice a week. Over half of the participants consumed red meat and chicken 2-3 times/week. In terms of other risk factors, over half of the participants were obese ($BMI \geq 30 \text{ kg/m}^2$). Only 12% were current smokers. About 10% drank alcohol 5-7 days/week. Physical activity expenditure (MET minutes/week) showed no significant sex difference. The LS7 factors correlated significantly were BMI and blood glucose ($r = 0.157, p < 0.01$), total cholesterol and smoking ($r = -0.129, p < 0.01$), BP and BMI (with a moderate correlation of $r = 0.308, < 0.001$). The NZ participants in the PERKS-International trial, had poor diets, along with suboptimal lifestyle and biomedical stroke risk factors, reflecting the inclusion criteria for the study. Urgent action is required for the primary stroke prevention at population-level. The results of the trial, expected in 2024, will show the benefit of a mobile phone app on reducing these stroke risk factors.

Keywords: diet; stroke; prevention; risk factors

Ethics Declaration

Yes

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Reference

1. Gall SL, Feigin V, Thrift AG *et al.* (2023) *Int J Stroke* **18**(4), 477–483.