

Cohort comparison of the FINGER and U.S. POINTER trials

Background & Aims

Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER)¹ was the first trial to show positive effect of multidomain lifestyle intervention on cognitive performance².

U.S. Study to Protect Brain Health through Lifestyle Intervention to Reduce Risk (U.S. POINTER)³ trial resulted in similar findings⁴, despite the differences in eligibility criteria, recruitment, and population.

Our aim was to compare the characteristics of these cohorts to describe target groups that benefit from interventions.

Methods

FINGER included 1259 participants in Finland and U.S. POINTER included 2111 participants in the U.S. Age range was similar (60-77 vs. 60-79 yrs). FINGER recruited high-risk individuals from population based surveys based on dementia risk score (e.g. sex, education, and CVD risk factors) and cognitive test. U.S.POINTER targeted community based older adults who were sedentary, had suboptimal diet, and some other risk factors (e.g. family risk or CVD risk factors).

Results

The most evident differences were driven by inclusion and exclusion criteria (**Table 1**)

- FINGER included more men, those with low education, and lower cognition scores (MMSE)
- U.S.POINTER had higher proportion with family risk of cognitive impairment
- Less than half (37%) of the FINGER cohort fulfilled the U.S.POINTER inclusion criteria

Differences in other risk factors were mixed

- Most CVD risk factor levels, e.g. blood pressure and LDL cholesterol and composite Framingham scor, were higher in FINGER
- U.S.POINTER participants had higher BMI and glycated hemoglobin
- APOE4 carrier levels were similar

	U.S.POINTER (n=2111)	FINGER (n=1259)
Age (years)	68.2 ± 5.2	69.3±4.7
Female	1455 (68.9%)	587 (46.6%)
Post-college education	970 (45.9%)	282 (22.4%)
MMSE	28.9 ± 1.3	26.7±2.1
BMI (kg/m2)	30.0 ± 5.7	28.2±4.7
Systolic BP (mmHg)	131.1 ± 15.9	140.1±16.2
LDL cholesterol (mg/dl)	112.3 ± 36.1	119.4±33.6
HDL cholesterol (mg/dl)	59.3 ± 16.5	56.0±14.6
HbA1c (%)	5.9 ± 0.7	5.6±0.6
Framingham risk score(%)	16.8 ± 11.7	24.3±13.3
Married/partnered	1334 (63.2%)	932 (74.0%)
Family history	1651 (78.2%)	311 (24.7%)
APOE4 carrier	659 (31.2%)	388 (30.8%)
Current smoker	58 (2.7%)	114 (9.1%)

Both studies compared an intensive multidomain intervention to a less intensive program, but the comparator group in the U.S.POINTER was more active (self-guided intervention) than in the FINGER (regular health advice).

We collected published characteristics from the U.S.POINTER trial, harmonized with FINGER data, and compared them using Immediate form of two-sample t test (continuous variables) or test of proportions (categorical).

Conclusions

Multidomain lifestyle interventions can have positive effect on different at-risk populations, as indicated by the differences in the FINGER and U.S.POINTER cohorts. Inclusion criteria in both trials appear to select participants who benefit from intervention, even though they only partly overlap with each other.

Table 1. Baseline characteristics of the randomised participants

Numbers are mean±SD for continuous and N (%) for categorical variables. All comparisons were statistically significantly different (p<0.001), except for ApoE4 carriership.



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