

Lifestyle interventions for dementia risk reduction - global findings and implications

Dr. Susanne Röhr
Associate Professor
Health and Ageing Research Team (HART)
School of Psychology, Massey University

Multimodal interventions simultaneously address **several modifiable** health and lifestyle factors known to be associated with dementia

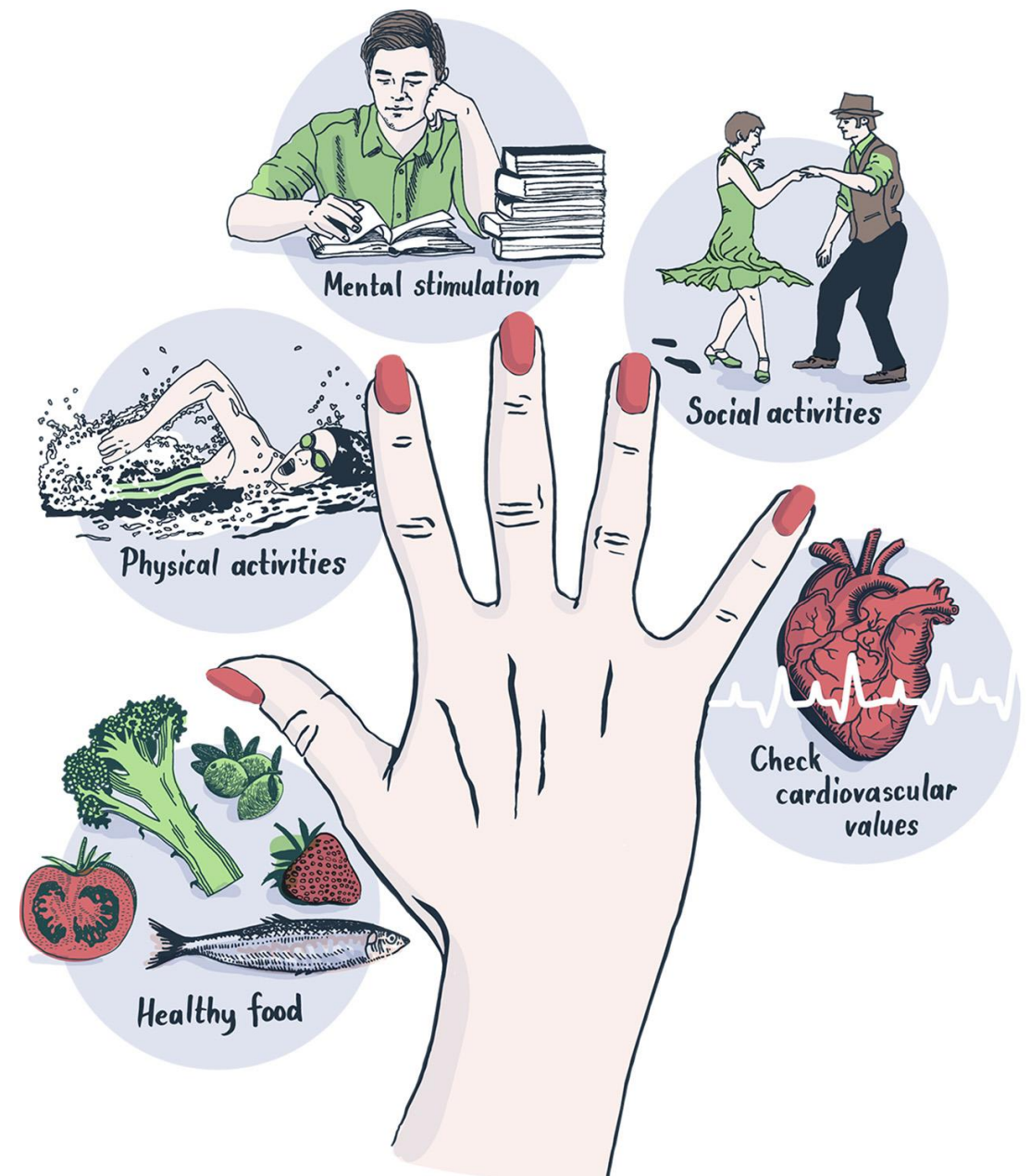
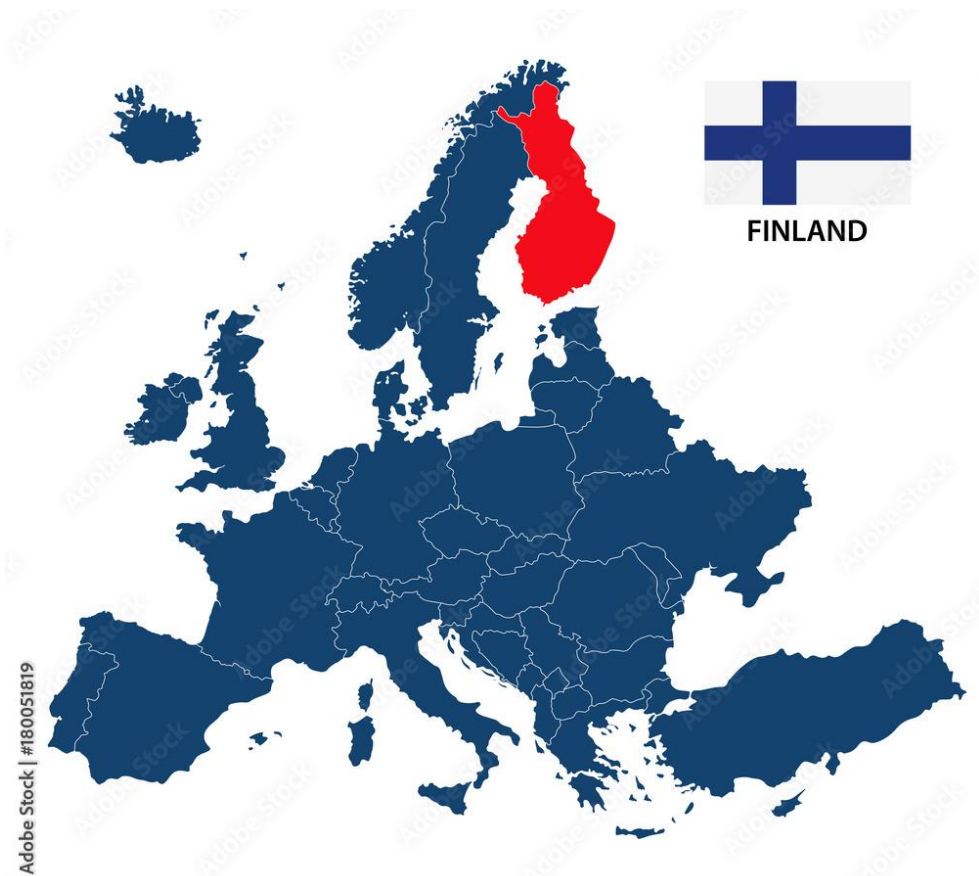


Illustration: Martina Krona from the book "Brain Health" (Miia Kivipelto, Mai-Lis Hellénus)

FINGER

Finnish Geriatric Intervention Study to Prevent Cognitive Impairment and Disability (FINGER)



1,260 individuals aged 60-77 at increased dementia risk

2-year intervention vs. general health advice

(Ngandu et al. 2015, Lancet)

+25%

Overall cognition

+83%

Executive function

+40%

Memory function

-60%

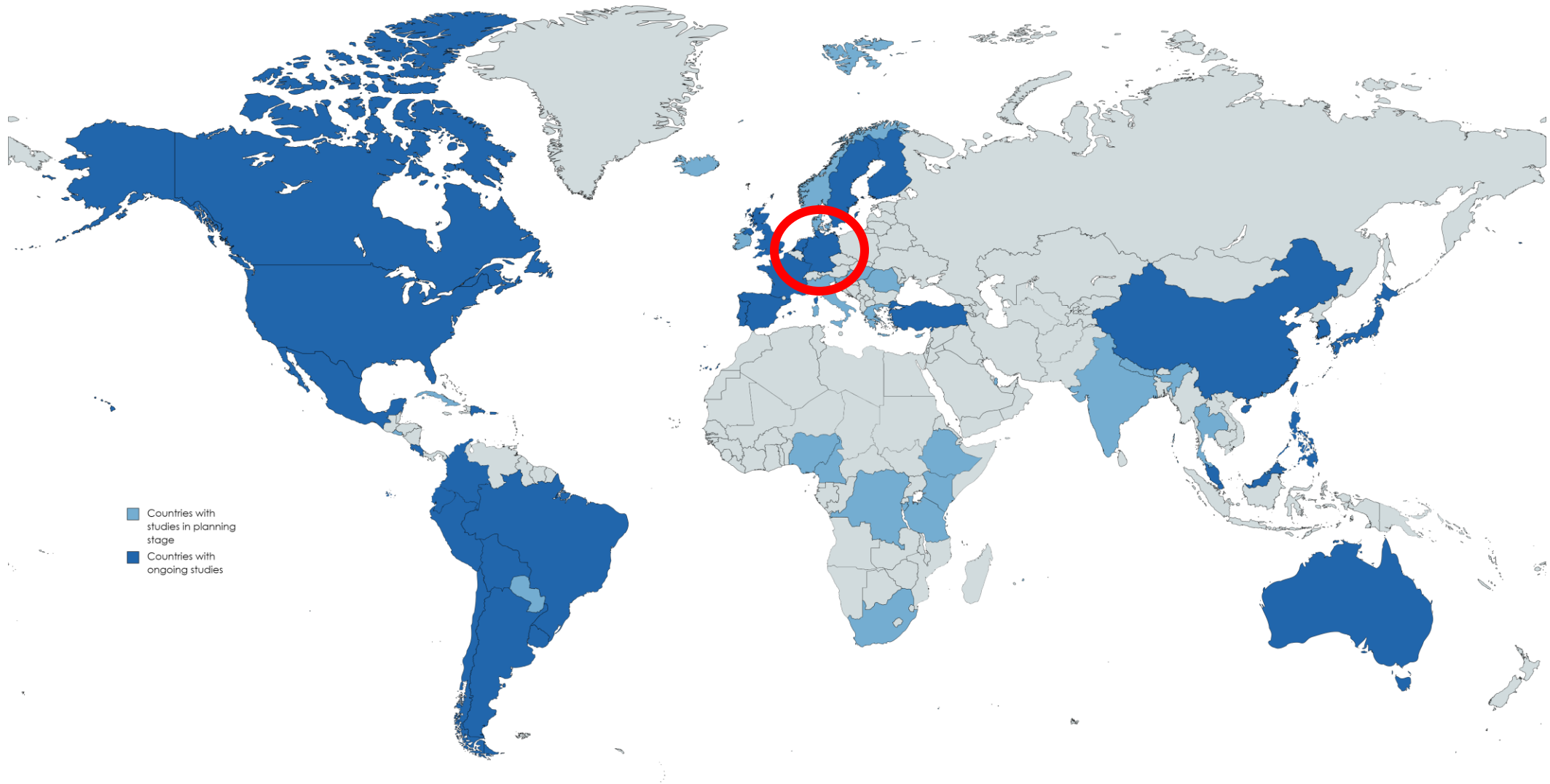
Other chronic diseases

+150%

Processing speed

Results from 1260 participants, age 60-77.

(Ngandu et al. 2015, Lancet)



AgeWell.de

Multi-centre randomized controlled trial against cognitive decline in **older primary care patients** in Germany

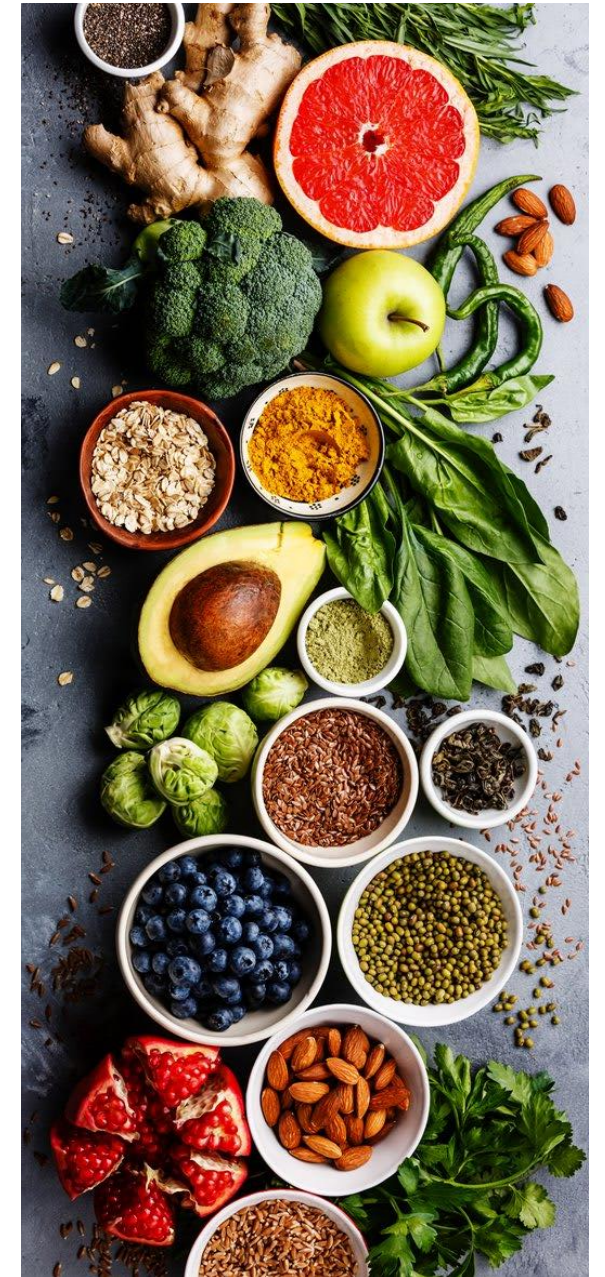


Diet

Individual counseling at baseline

Provided a **recipe book**

Diary for monitoring



Physical activity

Muscle-strengthening, flexibility, and balance on 2 days per week for 20-30 min

Aerobic activity on 3–5 days per week for 20–30 min

Provided with a **pedometer**



Cognitive stimulation

Cognitive training at home on a regular basis - 3 times per week for 15 min

Provided a tablet with the app
NeuroNation



Social engagement

Social activities **planned together** with each study participant individually



Management of cardiovascular risk factors

Comprehensive health check up in collaboration with participants' GPs



Medications check

GP and participant information on participants' medication

Electronically supported **data evaluation** to identify **potentially inappropriate medication**



Mood enhancement

In case of **depressive symptoms, bereavement, grief**

Tailored support



Motivation

Personnel **continuity**

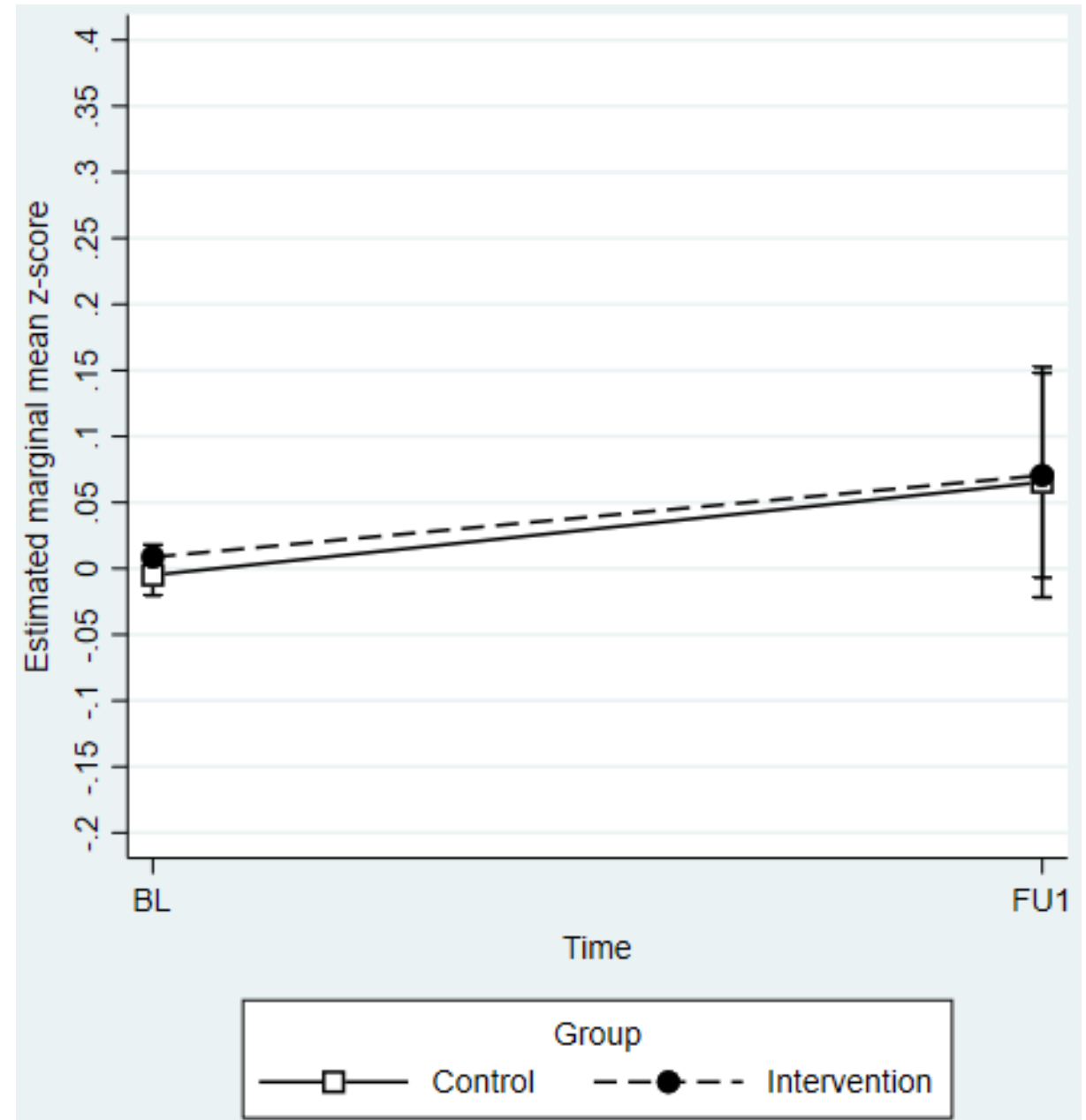
Motivational interviewing techniques

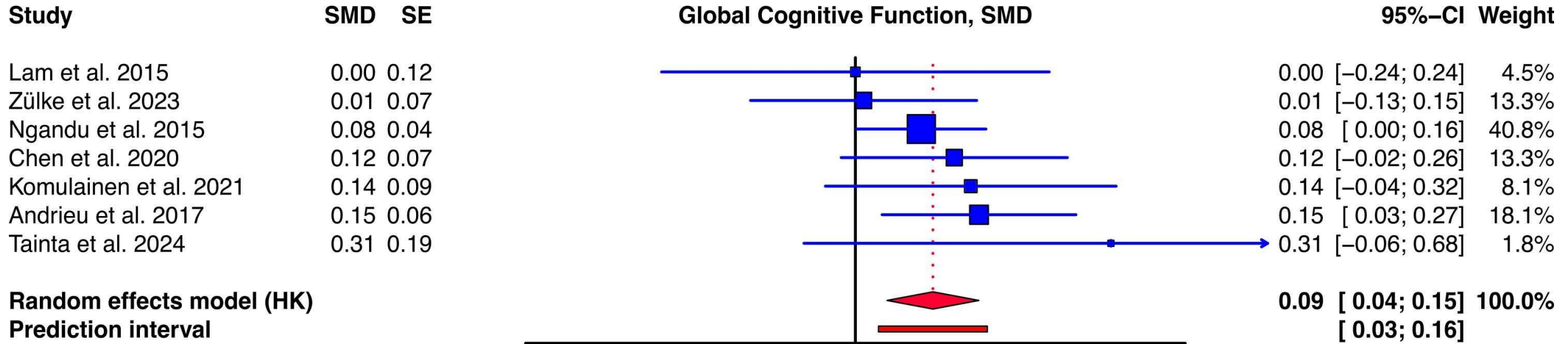
Weekly diary to track activities



Results

**SMD: .010 (95%CI = -0.13, 0.15);
 $p = .838$**



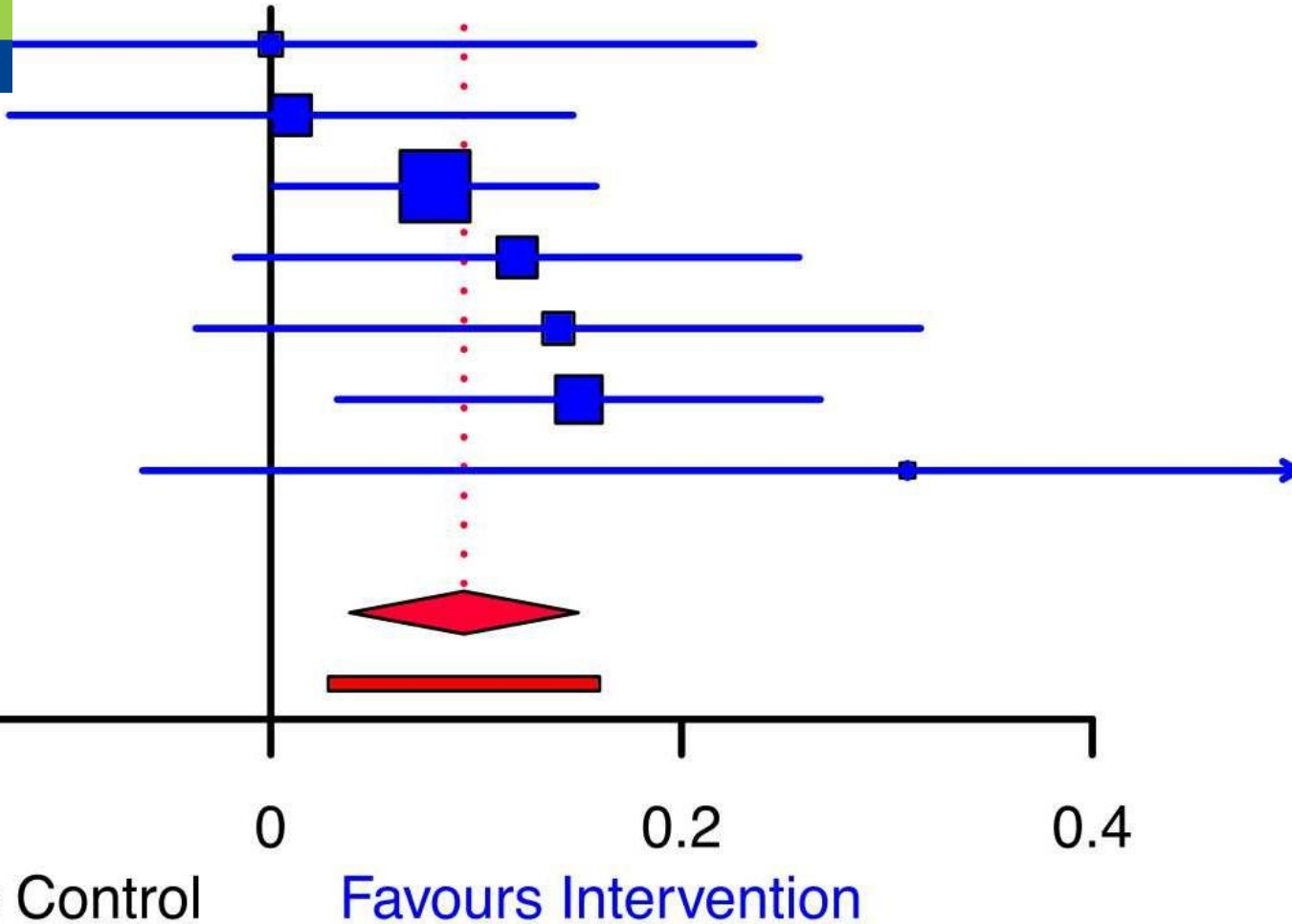


Heterogeneity: $I^2 = 23.2\%$, $\tau^2 < 0.0001$, $\chi^2_6 = 4.74$ ($p = 0.58$)
 $t_6 = 4.14$ ($p = 0.006$)

(Reparaz-Escudero et al., 2024)



Cognitive Function, SMD



	95%-CI	Weight
0.00	[-0.24; 0.24]	4.5%
0.01	[-0.13; 0.15]	13.3%
0.08	[0.00; 0.16]	40.8%
0.12	[-0.02; 0.26]	13.3%
0.14	[-0.04; 0.32]	8.1%
0.15	[0.03; 0.27]	18.1%
0.31	[-0.06; 0.68]	1.8%
0.09	[0.04; 0.15] [0.03; 0.16]	100.0%

(Reparaz-Escudero et al., 2024)

“**Short**” duration of follow-up

Individuals with **increased risk**

Breaking “bad” habits is difficult /
motivation

Lack of **context**



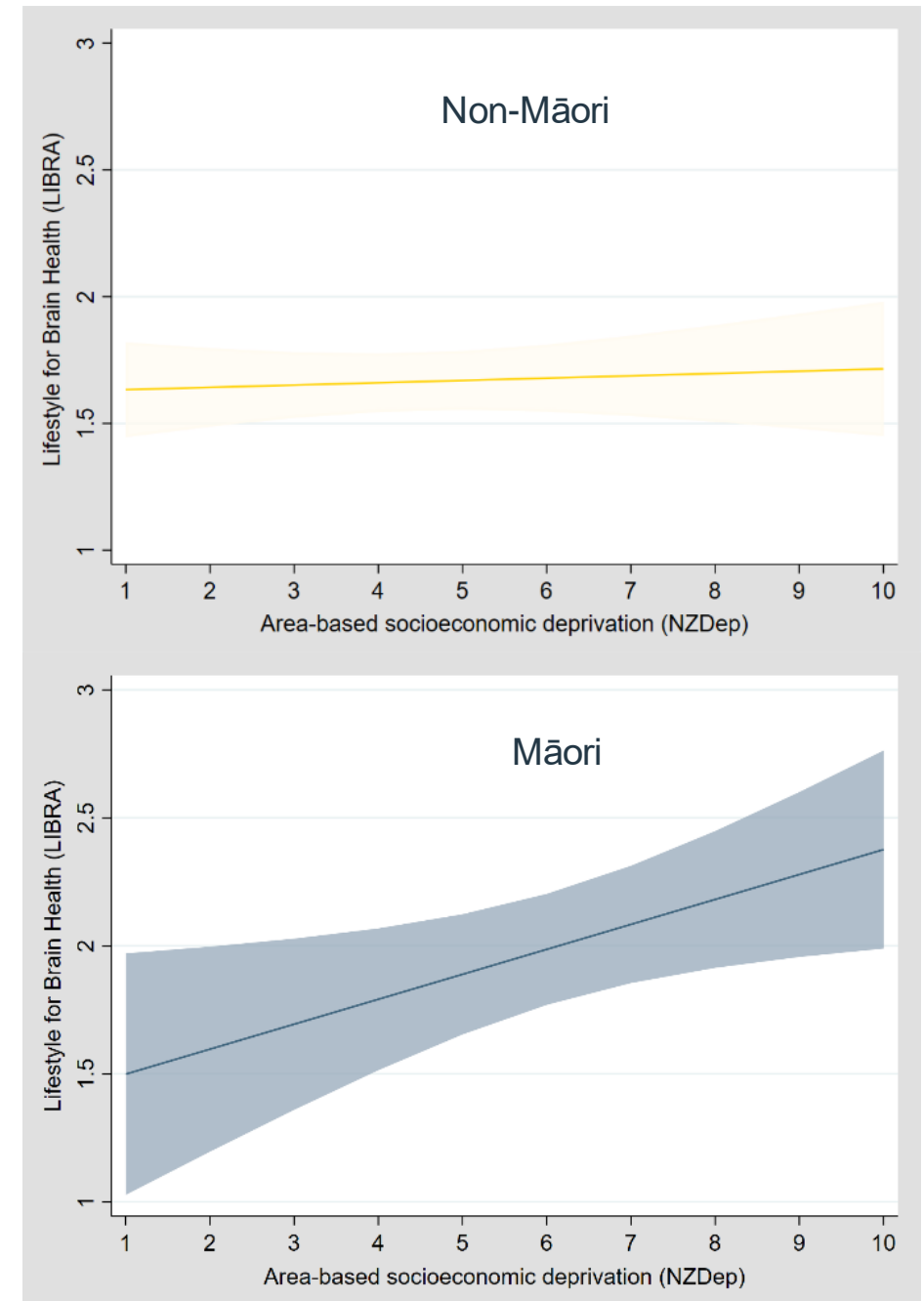
Social determinants of health (SDOH)

Conditions in which individuals are born, grow, live, work and age determine our health

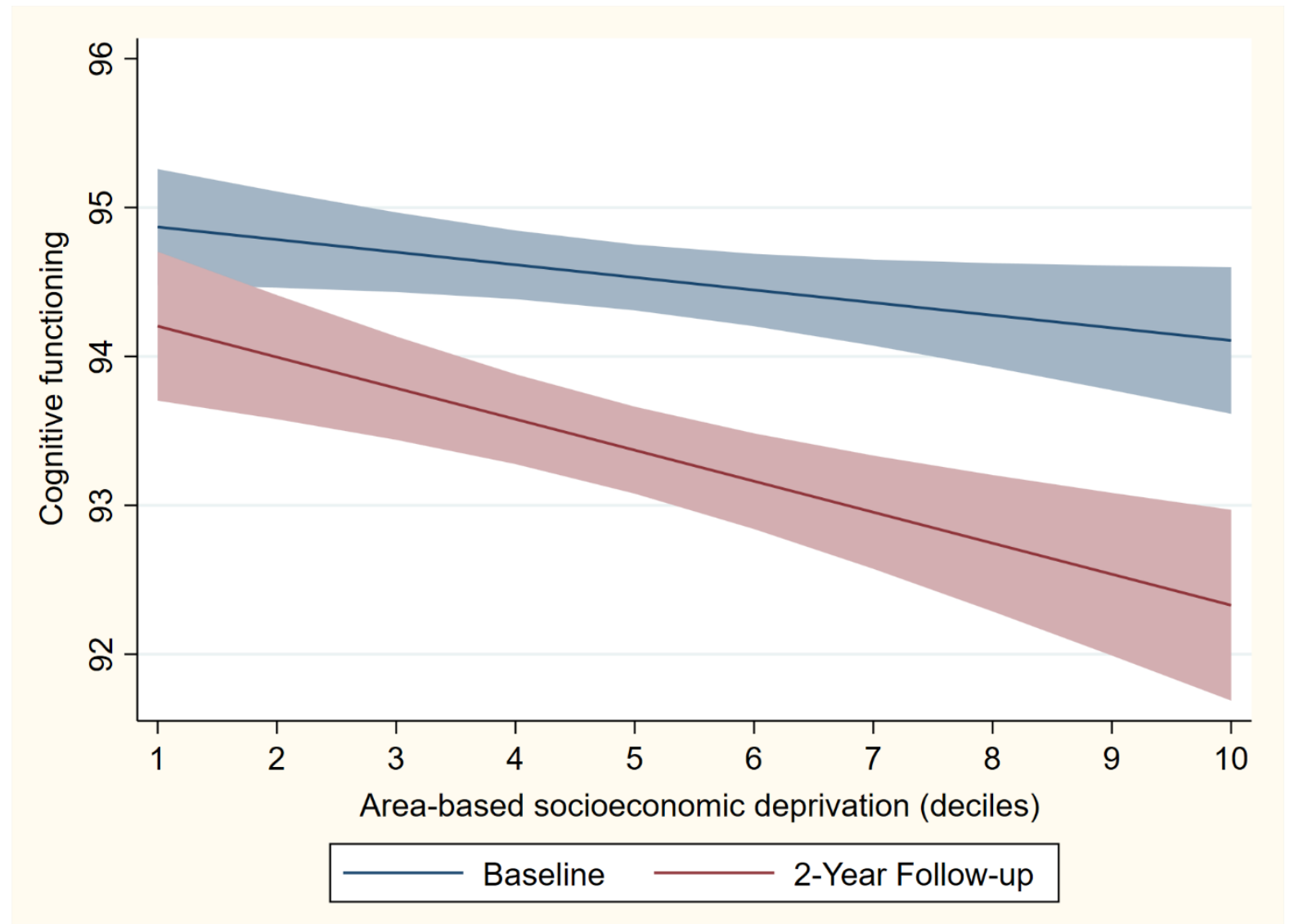
Lifestyle choices are influenced by SDOH and constrained by social hierarchy



Higher area-based socio-economic deprivation is associated with poorer lifestyle for brain health, particularly in Māori



Higher area-based deprivation predicts **cognitive decline** in midlife and early late life New Zealanders





Take-Home Messages

Lifestyle interventions may be beneficial, but they remain resource-intensive

It is never too early, and never too late to improve lifestyle habits

Reducing social inequities and improving living conditions will likely be **more effective and sustainable**

Educate about brain health from an early age



Research opportunities with HART:



Thank you!

Susanne Röhr



s.roehr@massey.ac.nz

PROTECTING THE PLANET AND OUR BRAINS:

A Photographic Exploration

Meet the artists and researchers and join the Opening Celebration on Sunday, 13 October 2024, 4 to 6 pm.



11 - 25 October 2024
Becroft Gallery, Lake House Arts Centre
37 Fred Thomas Drive, Takapuna, Auckland
Mon - Fri 9am - 3pm Weekends - 10am - 2pm

View 28 photographs by 14 Auckland residents, exploring the links between lifestyle, brain health, and environmental stewardship. This project, intersecting research and the arts, highlights how sustainable living practices can enhance brain health and reduce the risk of dementia, especially in the context of climate change.

