

The development and testing of the Sus-Health Index: A combined score which assesses and presents the nutritional content and environmental impact of a meal

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Background and Aims

Changes in dietary patterns are essential to reduce diet-related environmental impacts whilst contributing to good health



- 1) co-create an index that describes both the nutritive value and environmental impact of meals in one combined index
- 2) to test the impact of that index on influencing consumer food choices

Sus-Health Project team

- Professor Lynn Frewer (PI)
- Dr Orla Collins
- Dr Novieta Sari
- Dr Rao Fu



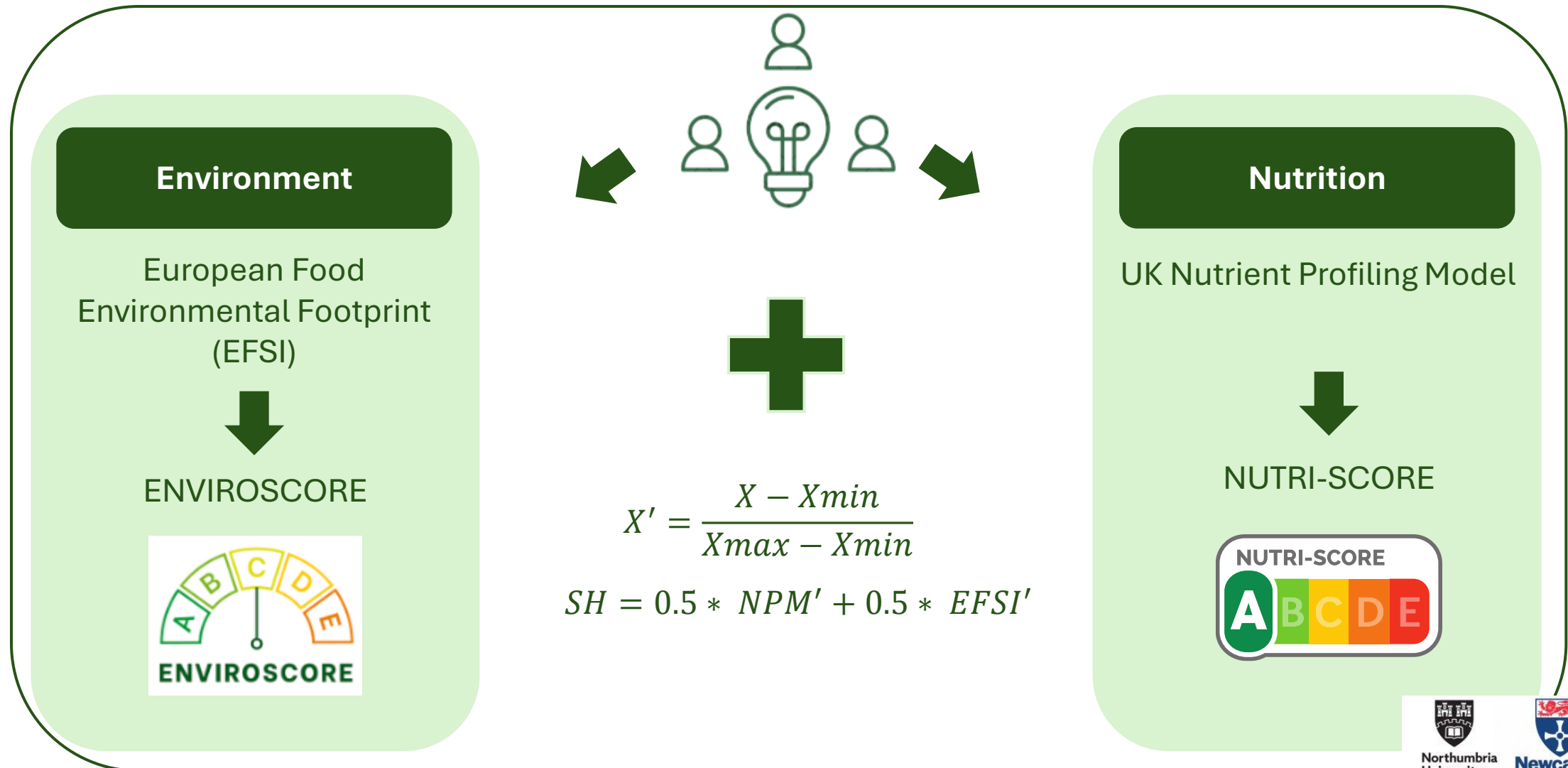
- Professor Francisco Areal



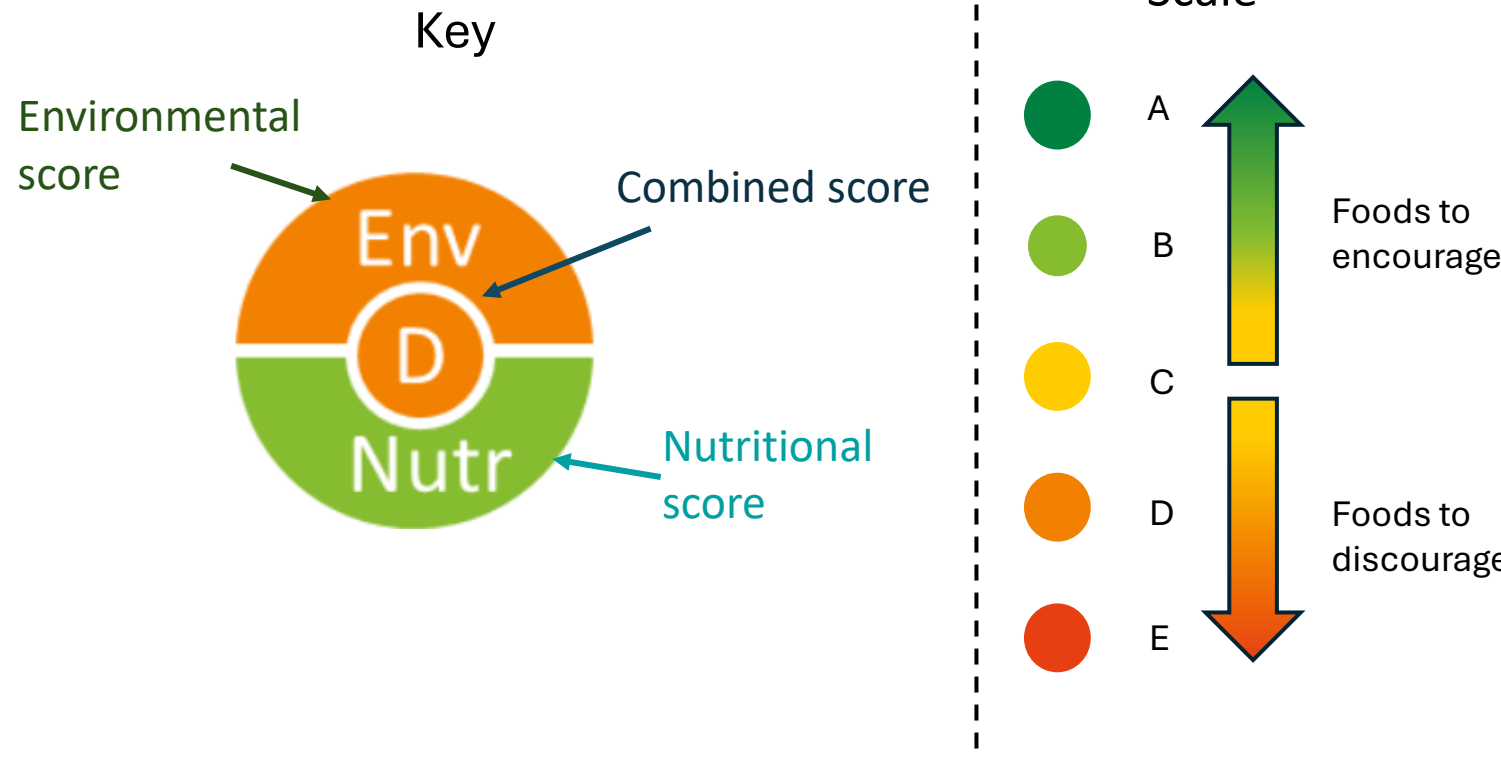
- Professor Paul Brereton
- Professor George Hutchinson
- Dr Jelena Vlajic
- Dr Beatrice Smyth
- Dr Anne Nugent
- Professor Jayne Woodside
- Dr Joe Livingstone
- Dr Leona Lindberg
- Dr Vasilis Grigoriadis (now University of Ioannina)



Development of the Sus-Health index



Sus-Health Index



Grigoriadis, V., Livingstone, D., Thomas, E.L., Brereton, P., Woodside, J., Nugent, A., Smyth, B., Hutchinson, G., Vlajic, J., Areal Borrego, F. and Collins, O., 2025. Developing the Sus-Health Index: a combined measure for describing environmental impact and nutritive value of foods and meals. *Philosophical Transactions B*, 380(1935), p.20240160.

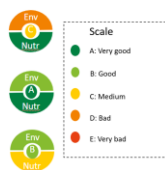
Testing of the Sus-Health Index

Framed field experimental design

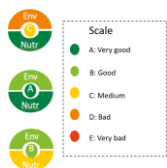
Menu 1



Menu 2



Menu 3



≥100 students



>18 years old



No food allergies

Testing of the Sus-Health Index

Menu card 1

CHOICE 1	Battered haddock and chips, with mushy peas	£19.00
CHOICE 2	Steak burger with Ballymaloe relish, mature cheddar, onion ring and chips	£20.00
CHOICE 3	Strangford lough mussels in white wine and garlic cream, with toasted garlic ciabatta	£19.00
CHOICE 4	Linguine Arrabiata; Pasta in a spiced tomato sauce (Vegan)	£17.00
CHOICE 5	Whole tail scampi with chunky tartare sauce and chips	£18.50
CHOICE 6	Thai red vegetable curry with Aromatic rice (Vegan)	£17.00
CHOICE 7	Garlic and chilli prawn taco, herb yoghurt, Pico de gallo, with chips	£19.50



Testing of the Sus-Health Index

Menu card 2

CHOICE 1	Battered haddock and chips, with mushy peas [Good Sus Health Index B made of good Env and very good Nutr scores]	£19.00	Env B Nutr
CHOICE 2	Steak burger with Ballymaloe relish, mature cheddar, onion ring and chips [Bad SH Index D, = bad Env and good Nutr Score]	£20.00	Env D Nutr
CHOICE 3	Strangford lough mussels in white wine and garlic cream, with toasted garlic ciabatta [Good SH score B = good Env, medium Nutr]	£19.00	Env B Nutr
CHOICE 4	Linguine Arrabiata; Pasta in a spiced tomato sauce (Vegan) [V good SH score A = good Env and V good Nutr scores]	£17.00	Env A Nutr
CHOICE 5	Whole tail scampi with chunky tartare sauce and chips [Medium SH score C = Bad for Env, V Good for Nutr]	£18.50	Env C Nutr
CHOICE 6	Thai red vegetable curry with Aromatic rice (Vegan) [Good SH score B = Bad for Env V Good for Nutr]	£17.00	Env B Nutr
CHOICE 7	Garlic and chilli prawn taco, herb yoghurt, Pico de gallo, with chips [Medium SH score C = Bad for Env and Good for Nutr]	£19.50	Env C Nutr



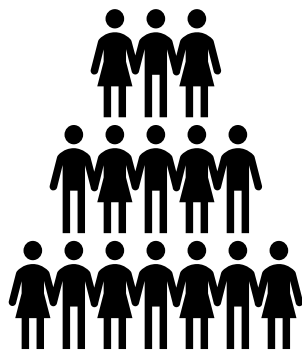
Testing of the Sus-Health Index

Menu card 3

CHOICE 1	Battered haddock and chips, with mushy peas (Reduced by £3.00)	£16.00	Env B Nutr
CHOICE 2	Steak burger with Ballymaloe relish, mature cheddar, onion ring and chips (Not Reduced)	£20.00	Env D Nutr
CHOICE 3	Strangford lough mussels in white wine and garlic cream, with toasted garlic ciabatta (Reduced by £3.00)	£16.00	Env B Nutr
CHOICE 4	Linguine Arrabiata; Pasta in a spiced tomato sauce (Vegan) (Reduced by £3.00)	£14.00	Env A Nutr
CHOICE 5	Whole tail scampi with chunky tartare sauce and chips (Not Reduced)	£18.50	Env C Nutr
CHOICE 6	Thai red vegetable curry with Aromatic rice (Vegan) (Reduced by £3.00)	£14.00	Env B Nutr
CHOICE 7	Garlic and chilli prawn taco, herb yoghurt, Pico de gallo, with chips (Not Reduced)	£19.50	Env C Nutr



Results from the living lab experiment

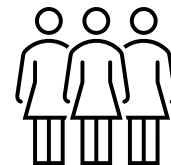


N= 111 students

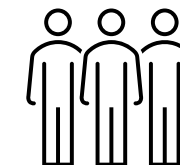
5 lunch sessions

2 dinner sessions

26/02/2024 - 08/03/2024



N= 64 (58%)



N= 47 (42%)



N= 59 (53%)



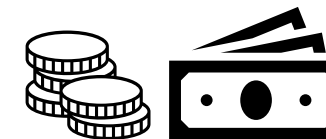
N= 52 (47%)



N= 35 (32%)

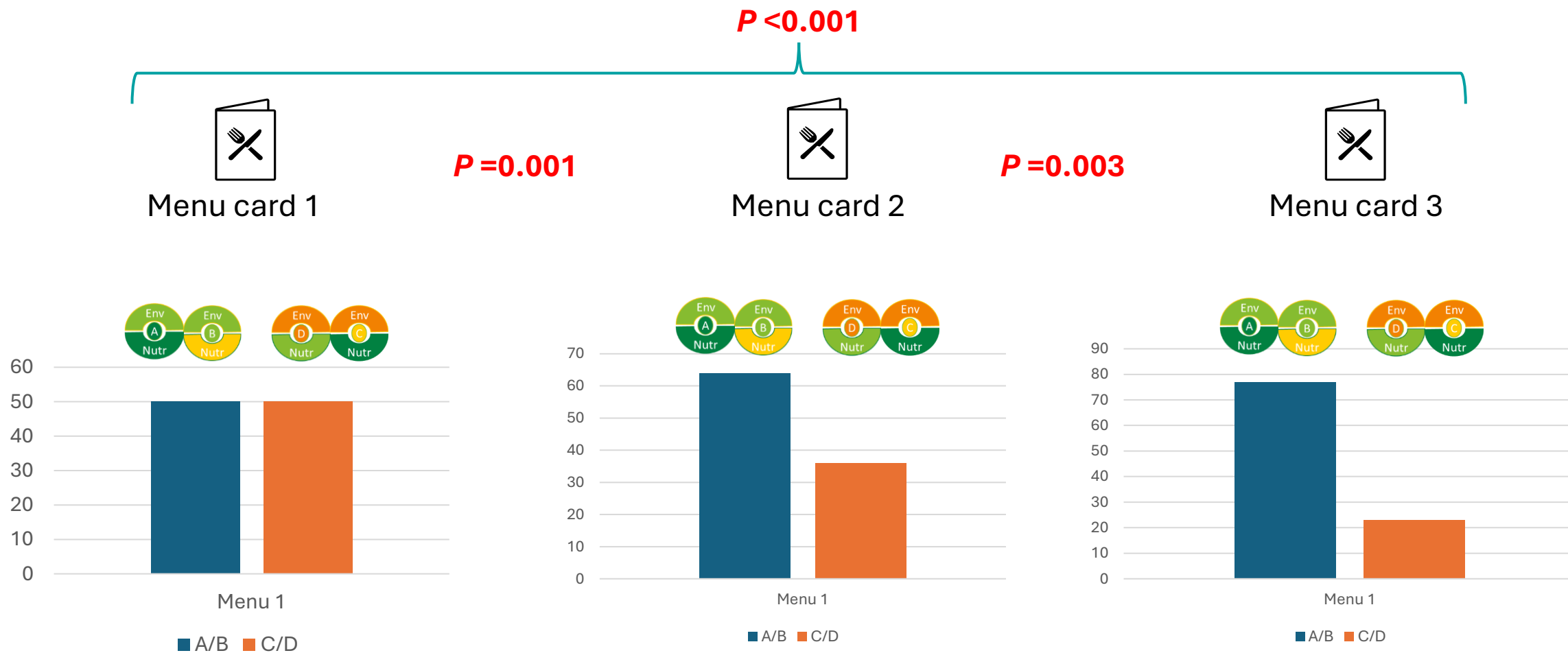


N= 39 (35%)

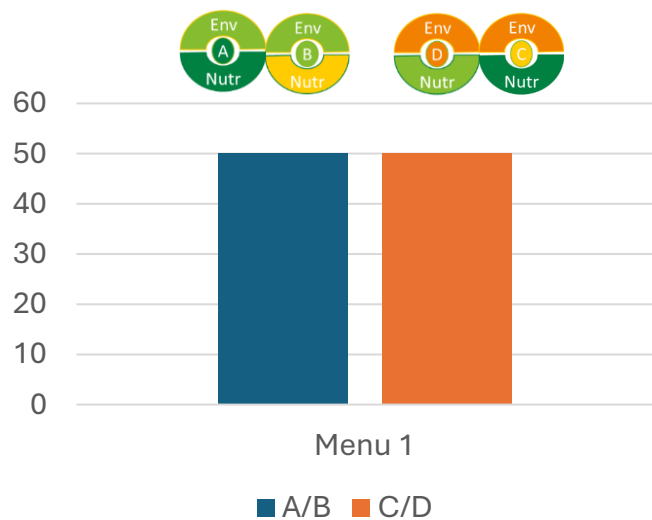
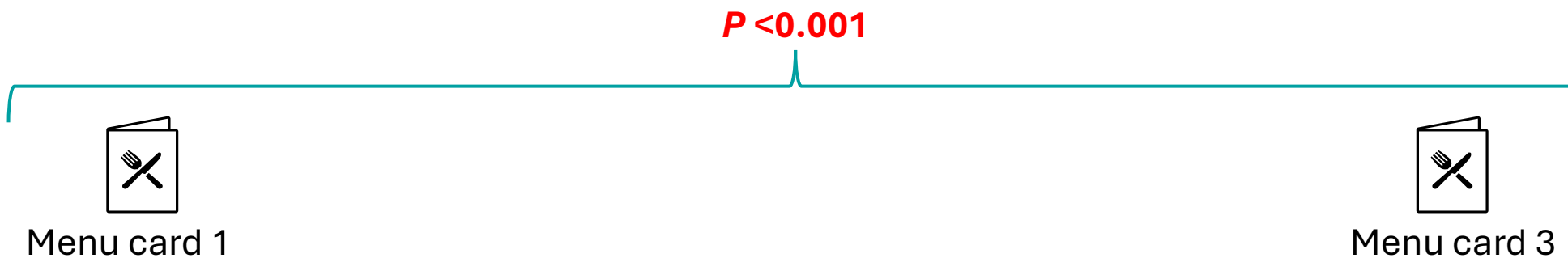


N= 34 (31%)

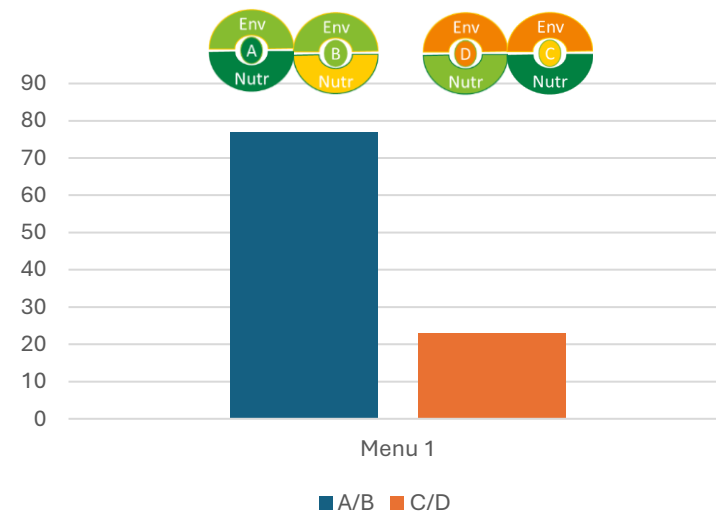
Results from the living lab experiment



Results from the living lab experiment



$P < 0.001$



Conclusions



The Sus-Health index was successful at influencing consumer meal choices

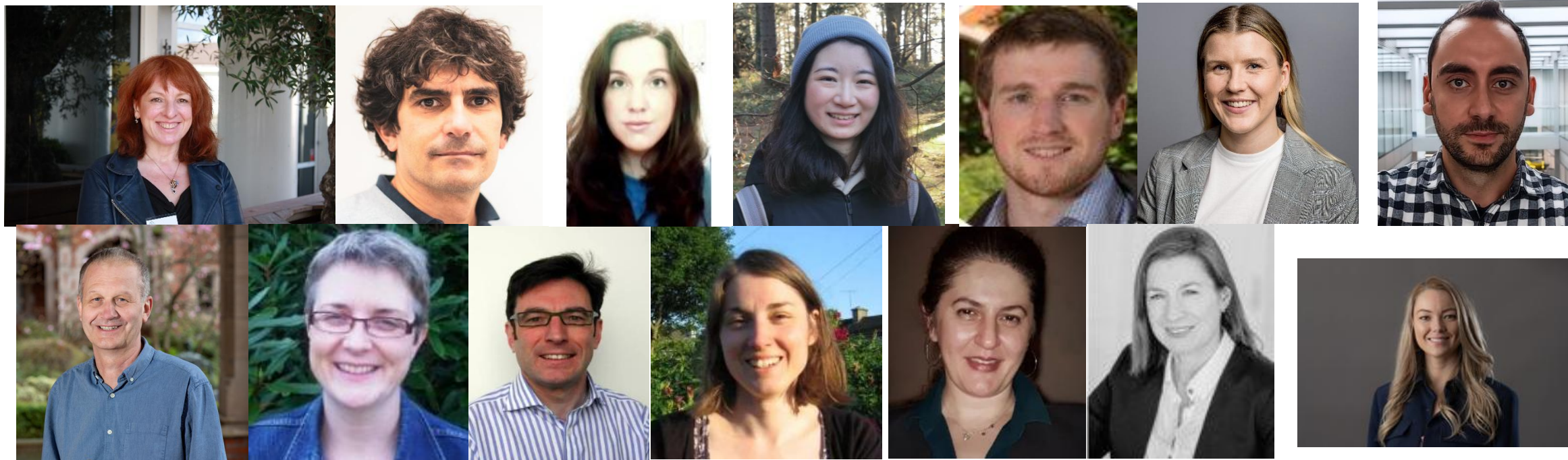


The Sus-Health index AND price adjustments were more successful at influencing consumer meal choices within this income constraint group



Further research on the effectiveness of the Sus-Health index among different demographic groups and within different contexts is necessary

Acknowledgements



Living lab participants

Thank you for your attention!



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More information available here:

<https://www.ncl.ac.uk/nes/our-research/social-science/sushealth/>