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Energy &
Environment Institute

- 1. The Health Determinants Research Collaboration North Yorkshire: Understanding and addressing health inequalities in coastal communities**
- 2. Young people in coastal communities & mental health**

Dr. Jane Deville & Rachel Maw,

NIHR Health Determinants Research Collaboration North Yorkshire

Dr. Emily Murray,

Director of the Centre for Coastal Communities, University of Essex



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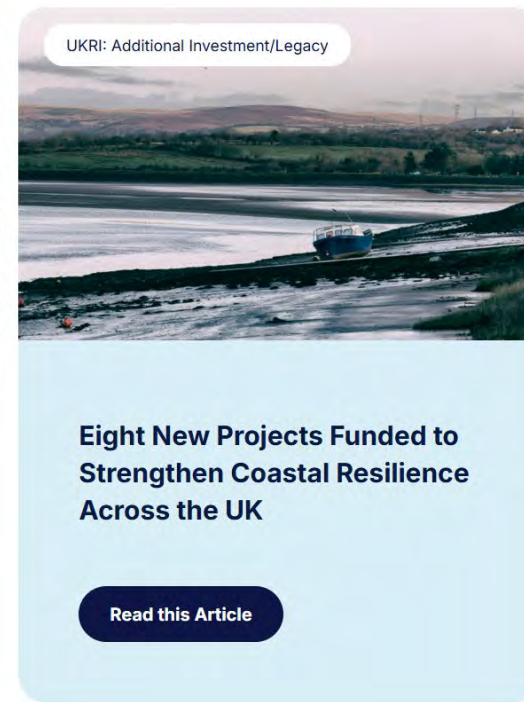
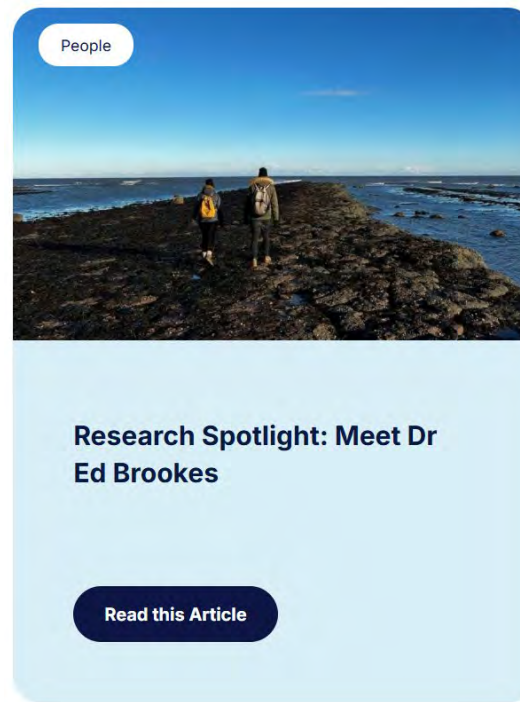
Coast-R Network

Coastal Communities & Seas Together for Resilience

Coast-R Year 1 Report on Coastal Change and Transition in the UK



Read our blogs to keep up-to-date!



<https://www.ukcoastalresilience.org/>



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The Health Determinants Research Collaboration North Yorkshire: Understanding and addressing health inequalities in coastal communities



Dr Jane Deville Hull York Medical School



Rachel Maw North Yorkshire Council

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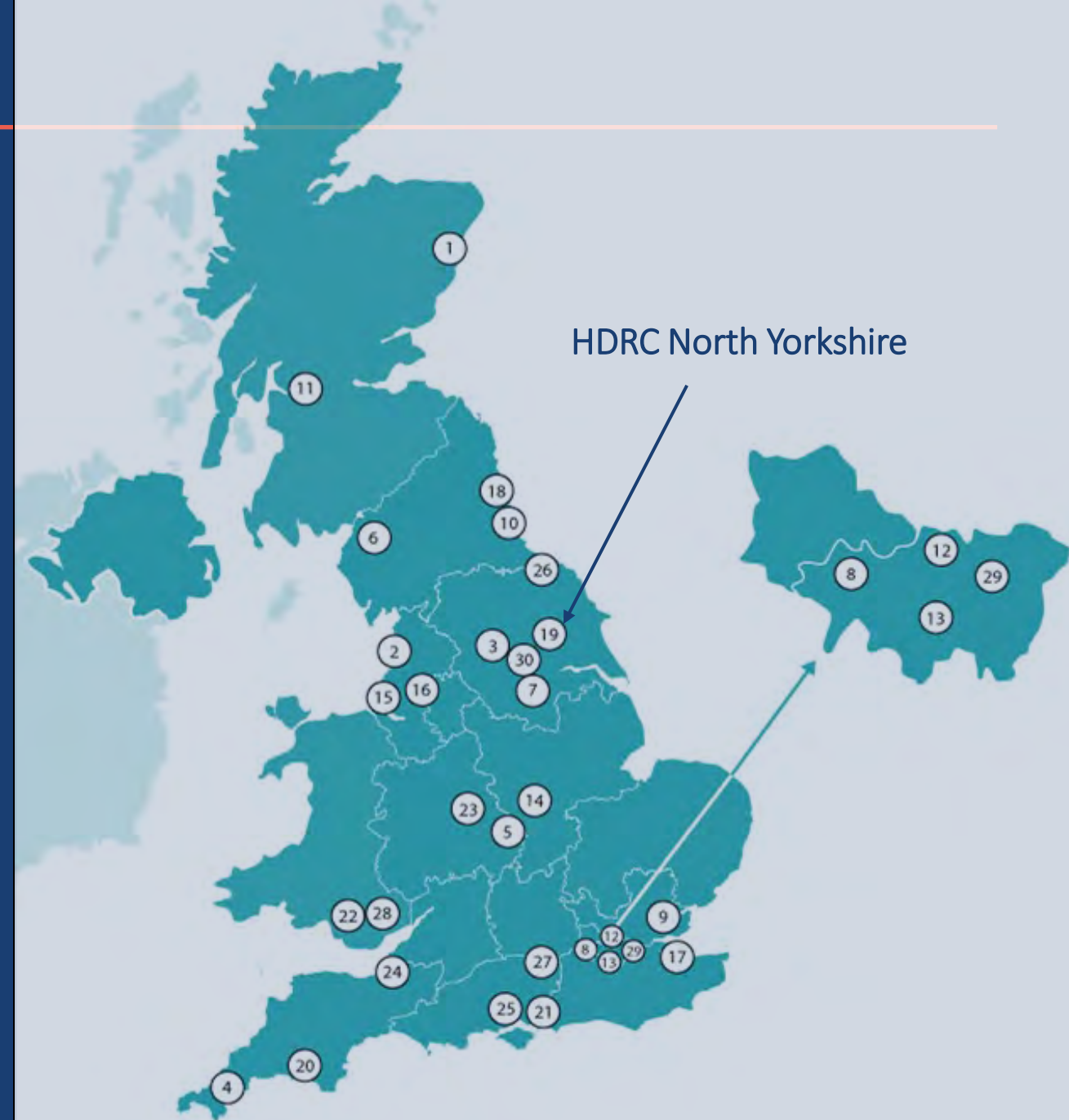
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The Health Determinants Research Collaboration North Yorkshire: Understanding and addressing health inequalities in coastal communities

- Introduction to HDRC North Yorkshire
- The coastal health needs assessment – what are the challenges on the North Yorkshire coast?
- Working towards evidence informed action for North Yorkshire's coastal communities

What is the HDRC?

- 5 year programme funded by National Institute for Health and Care Research (NIHR)
- HDRCs aim to:
 - embed a culture of research within Local Authorities
 - help staff learn to use evidence when decision making around health inequalities
 - carry out research where evidence isn't available
- Network of 30 HDRCs across the UK
- HDRC North Yorkshire is a collaboration between
 - North Yorkshire Council
 - University of Hull and
 - University of York (Centre of Health Economics)



The wider determinants of health



Emerging Priority Research Areas



- Equitable access and outcomes in Preventive Services
- **Improved health & wellbeing of coastal and rural communities**
- Good work: securing better outcomes for workers and business
- Good quality, affordable and sustainable housing
- Climate change and health

With a focus on under-researched groups including:

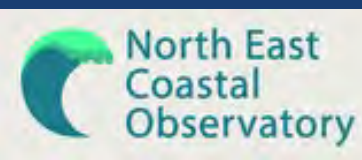
- Military Families and Veterans
- Women's Health & Wellbeing
- Gypsy, Roma, Traveller & showpeople communities



What are we doing at HDRC North Yorkshire?



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North East
Coastal
Observatory

Shifting Shores: A Serious Gaming Toolkit for Coastal Resilience and Community Dialogue

- Academic: Energy and Environment Institute, University of Hull
- NYC: Environment (Coastal Infrastructure)
- Research: Development of toolkit to help dialogue between coastal communities and authorities to help inform coastal policy



Good to Grow – helping local people to grow food

- Academic: HYMS and Hull Business School, University of Hull
- NYC: Localities Team
- Research: VCSE led research around increasing food growing in Scarborough

What next? Developing Areas of Research Interest (ARIs)

Published statements of topics or research questions which organisations would welcome more research on to inform their policies and practice.

Published by a range of policy bodies:

- UK Government Departments
 - What Works Centres
 - Combined Authorities / Local Councils
-
- Working with NYC to use the Coastal Health Needs Assessment to develop ARIs and research questions

What next? Developing Areas of Research Interest (ARIs)

Priority Research Area of Coastal Communities



Example ARIs and questions



Housing: Affordability, second homes & seasonal occupancy

What has been the impact of the second home tax on communities within North Yorkshire?

Economic opportunities: Tourism & seasonal work

What interventions could support economic diversification and improved health and outcomes in coastal areas of NY?



North Yorkshire Coastal Health Needs Assessment Overview

Rachel Maw: Public Health Officer

Healthier Lives, Communities and Economies

Areas to cover

- Rationale/drivers
- Methodology
- Definition of “coastal”
- What’s included in the HNA
- Key findings – Place
(wider determinants and deprivation)
- Next steps & links with the HDRC



Rationale/drivers

Chief Medical Officers report – **Health in Coastal Communities (2021)** highlights the serious health challenges faced by coastal communities – “the coastal excess of disease”. Chief Medical Officer’s Annual Report 2021 - Health in Coastal Communities (publishing.service.gov.uk)

ONS report - **Coastal Towns in England and Wales (2020)** states that between 2009 and 2018, 50% of coastal towns had a decline in employment compared with 37% of non-coastal towns. Coastal towns in England and Wales - Office for National Statistics (2020)

PHE review (now OHID)- **Health inequalities in ageing in rural and coastal areas (2019)** states more research needed with a focus on strengths, assets and sources of resilience, as well as more research into inequalities in healthy ageing in coastal areas. [Health inequalities in ageing in rural and coastal areas - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/research-data-and-analysis/publications/health-inequalities-in-ageing-in-rural-and-coastal-areas)

Social Market Foundation report - **Living on the edge: Britain’s coastal communities (2017)** highlights significant economic and social challenges facing coastal communities, including poor health and poor educational outcomes. Living on the edge: Britain’s coastal communities - Social Market Foundation. (smf.co.uk)

To understand the health status and influencing factors affecting North Yorkshire's coastal communities, identify gaps in service provision and develop plans to address the challenges and barriers these populations face

Aim

Inform commissioning, service planning, appropriate targeting of resources.

Methodology

Data from various sources including OHID, ONS, Fingertips

Qualitative evidence from stakeholders has been gathered using a standard set of questions with a combination of face-to-face and online interviews (inc Town Council reps, Cllrs, GP's)



Definition of coastal

- No agreed national definition for coastal. Some studies only include seaside towns with a population over 10,000, while others include every local authority with a coastline or estuary or a distance from the coastline.
- Took a pragmatic approach - considering local identity, distance from the coast and population size
- NY definition includes the three main towns of Whitby, Scarborough and Filey, and coastal villages – **110,369 (17%) North Yorkshire residents live in coastal communities.**
- When looking at the MSOA health data we have made comparisons between NY coastal communities (two Whitby MSOAs, seven Scarborough and one Filey) and coastal villages, and North Yorkshire county and England.

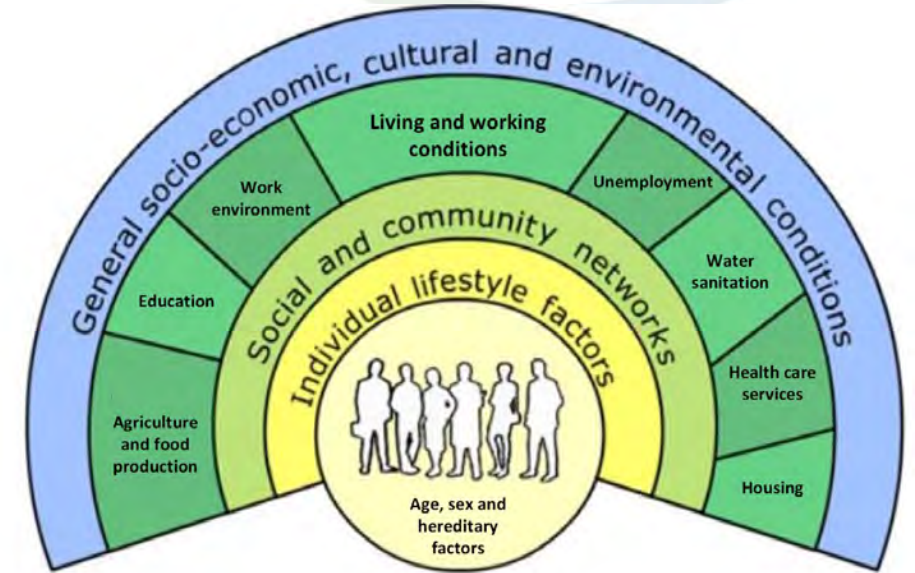
Caveat: most health data is only available at MSOA level, i.e. 7500 pop. This means we have not been able to include the coastal villages individually in the data analysis as their populations average 500.

What's included

Place – wider determinants of the health and deprivation

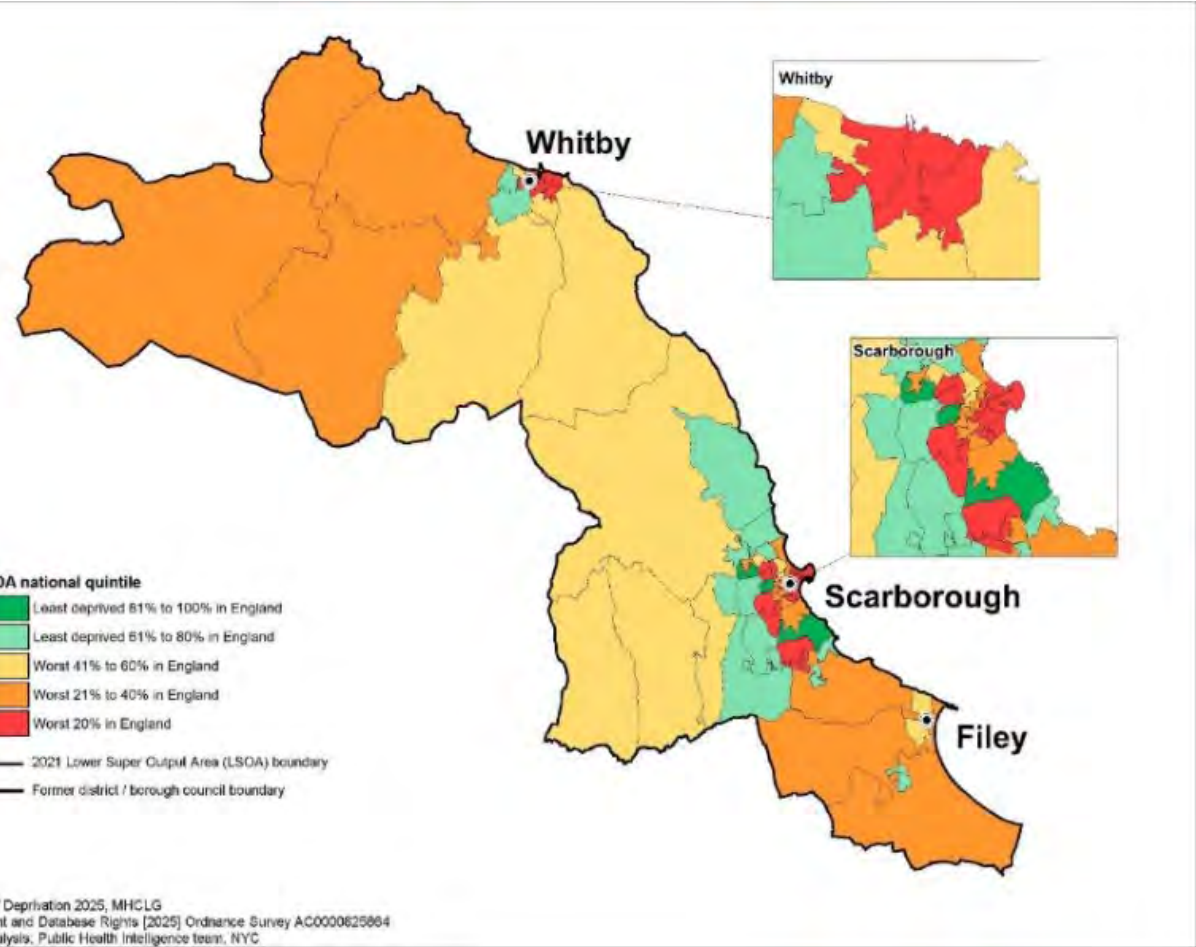
People – demographic profile, health indicators

Prevention – improving health and wellbeing



Place – deprivation

Indices of Multiple Deprivation 2025

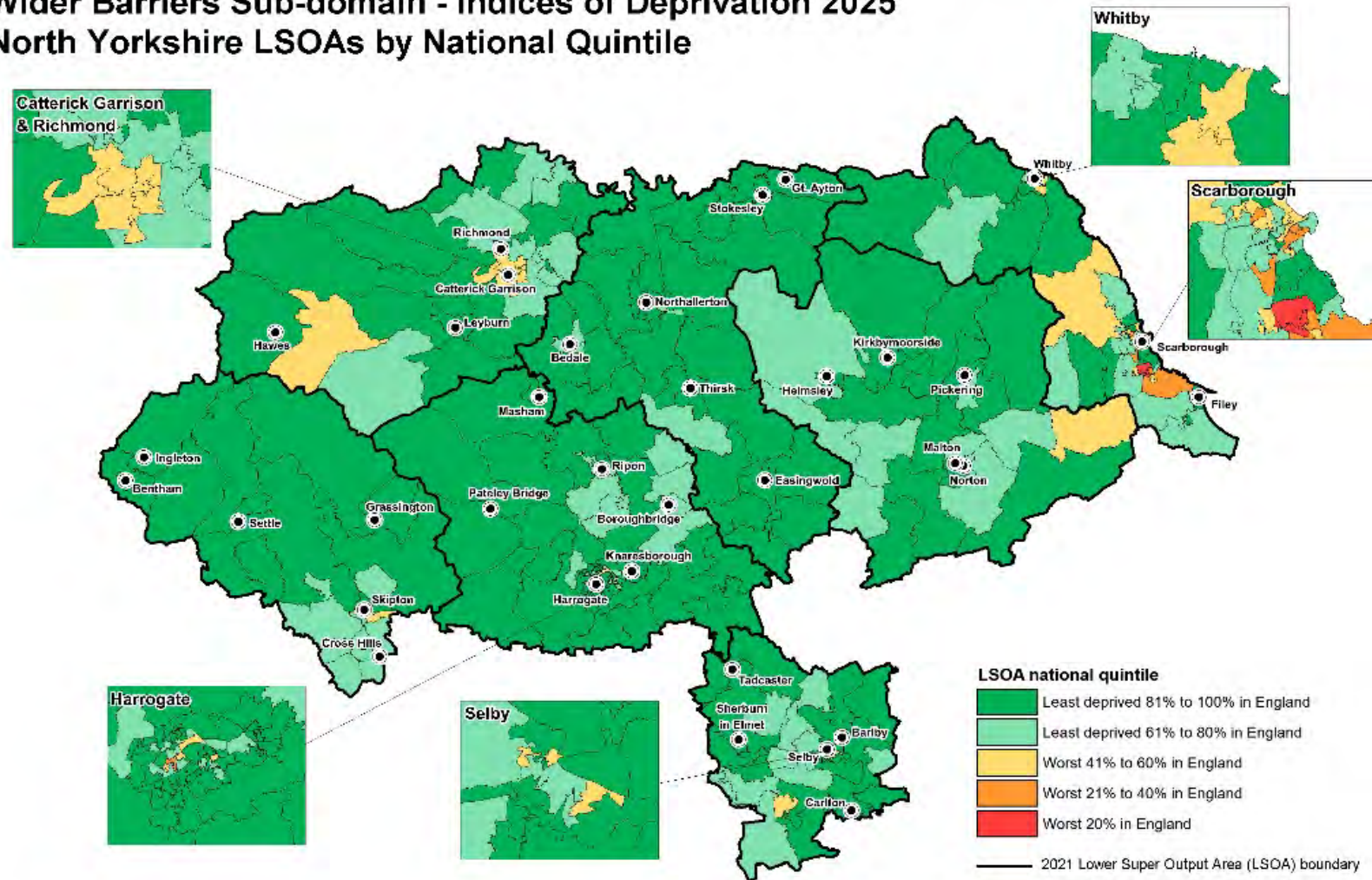


Proportion of LSOAs by IMD 2025 quintile



Place – Wider barriers sub domain

Wider Barriers Sub-domain - Indices of Deprivation 2025 North Yorkshire LSOAs by National Quintile

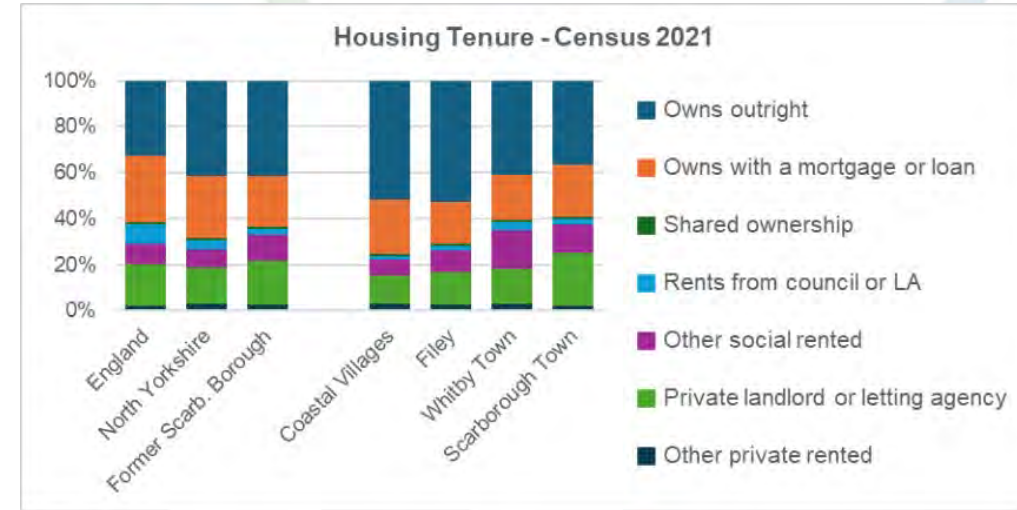


Notes

1. Source: Indices of Deprivation 2025, MHCLG
2. © Crown Copyright and Database Rights [2025] Ordnance Survey AC0000825864
3. Compilation & Analysis; Public Health Intelligence team, NYC

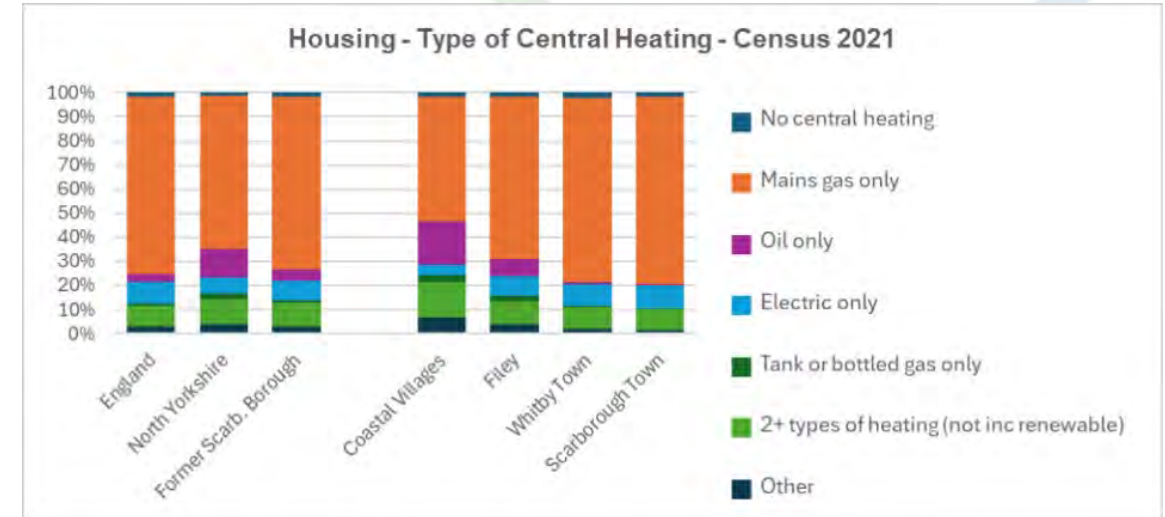
Place – housing

- Majority of residents own their property – proportions higher than England average
- Social rented housing – coastal towns equal or higher than England and North Yorkshire averages
- Scarborough – higher proportion of privately rented homes/letting agency than England or North Yorkshire
- Rates of overcrowding (-1 bedroom) in coastal villages and towns are similar to the North Yorkshire average of 1%, except in Scarborough which is slightly higher at 2%.



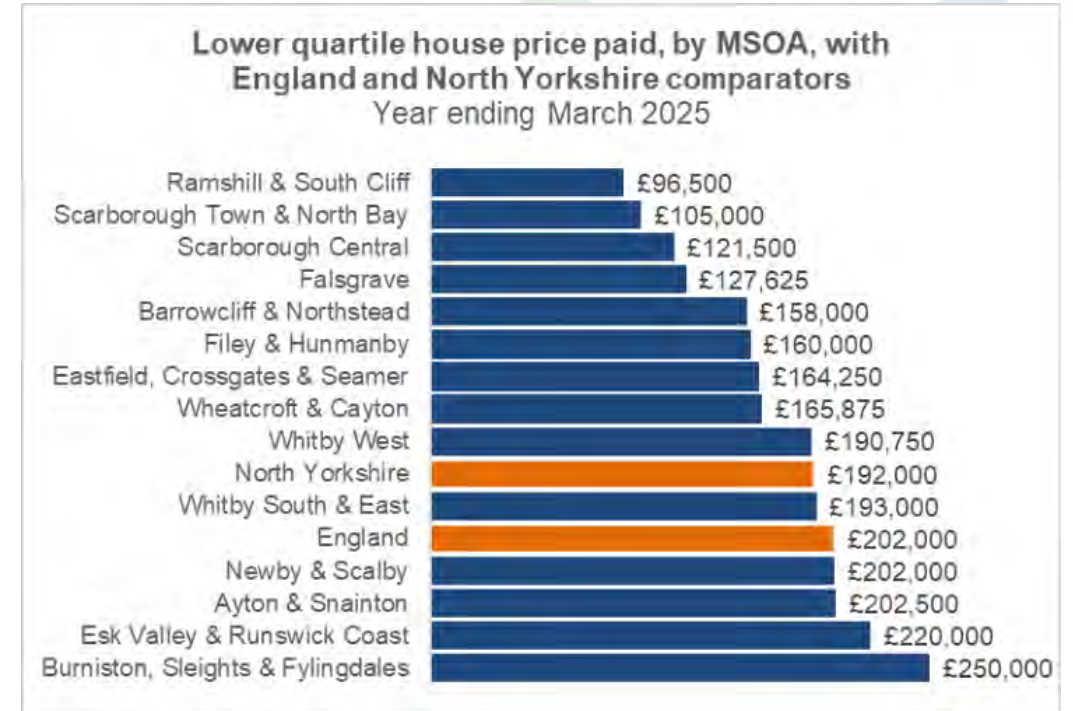
Place – housing

- Whitby and Scarborough have mains gas levels similar to England average but higher than North Yorkshire – due to the more rural nature of the county
- Coastal villages and Filey: 3% of households using bottled gas compared to 2% North Yorkshire and 1% in England
- Filey and coastal villages have more homes using 2 or more heating types compared to England.
- Coastal villages: 18% of homes use oil only (18%) compared to North Yorkshire (12%) and 3% in England



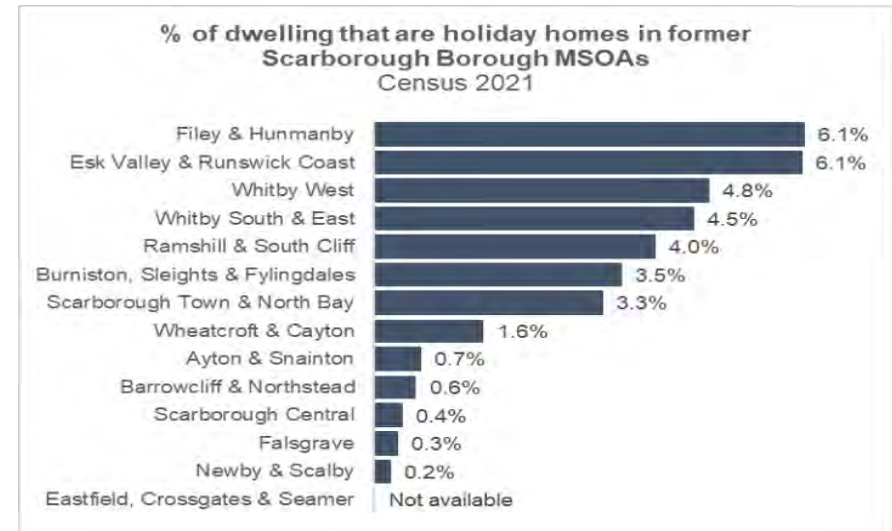
Place – housing

- Lowest lower-quartile house price paid was in Ramshill and South Cliff MSOA
- 4 MSOA's in North Yorkshire with the lowest prices paid in the year ending 2025 were in Scarborough town
- Highest quartile house prices were in the Coastal Villages - £250,000 – considerably higher than the North Yorkshire and England averages



Place – second homes

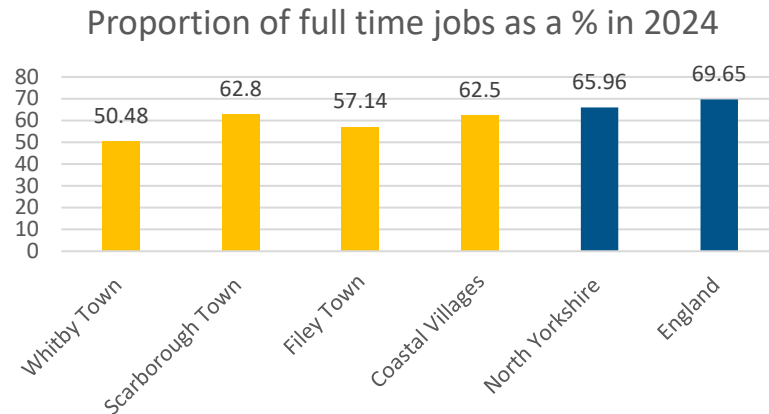
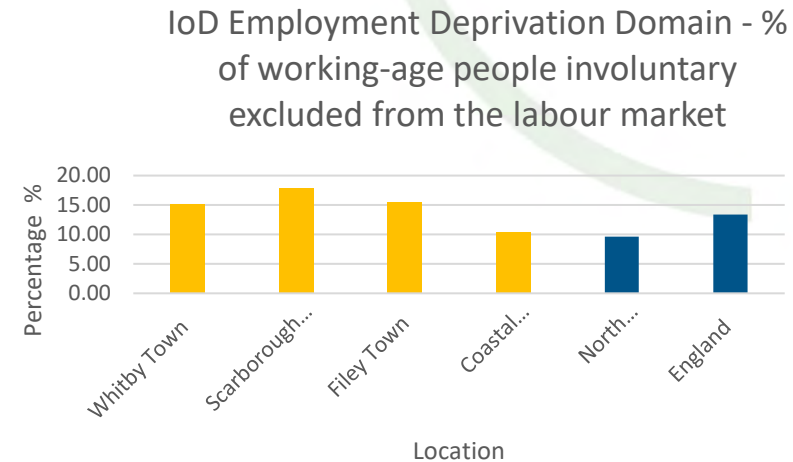
- By September 2025, the average house price in North Yorkshire had risen to £277,000 up from £265,000 in 2024 and average private rent increased by 4.7% from £798 to £835
- A systematic literature review by the University of York found concentrations of second homes raise local house prices and reduce affordability for permanent residents – especially in rural and coastal communities
- Second home ownership – reduction of 14% likely due in part from the introduction of council tax premium – similar reductions seen across the region
- Second home ownership continues to be high in North Yorkshire 2.89% neighbouring authorities average 0.84%
- North Yorkshire 5th highest number of second homes throughout England.
- North Yorkshire has a much higher average percentage of total homes not in use – equating to 1 in every 26 properties in the county not in regular use.



Place – employment status

Scarborough town has the highest employment deprivation (17.91%), indicating significant barriers to work with Whitby (15.15%) and Filey (15.51%). All three areas are above the national average (13.40%)

All NY Coastal communities have a lower share of full-time jobs - Whitby has the lowest proportion with 50.48% followed by Filey 57.14%. Scarborough and the Coastal Villages are closer to the North Yorkshire average (65.96%)



Source: BRES, 2024

Place – employment status

- Strong reliance on tourism and visitor-related industries – Filey has highest reliance on accommodation and food (35.71%) – triple the England average (7.48%). Also significant in Whitby (28.57%). Coastal villages and Scarborough are lower but remain above England average
- Health sector is a major employer in the coastal towns – Scarborough 23.41%, more than double the North Yorkshire average 11.01% and significantly above England average 13.37%. Whitby also shows elevated levels 15.24%
- Manufacturing accounts for 19.45% of jobs in Coastal villages – far above England (6.93%) and North Yorkshire (10.83%) averages
- Professional, scientific and technical industries are lower in Scarborough (2.56%) and Whitby (3.14%) compared with North Yorkshire (8.53%) and England (9.73%)
- Whitby (6.67%) and Scarborough (6.57%) have higher employment in public administration and defence compared to England (4.4%)

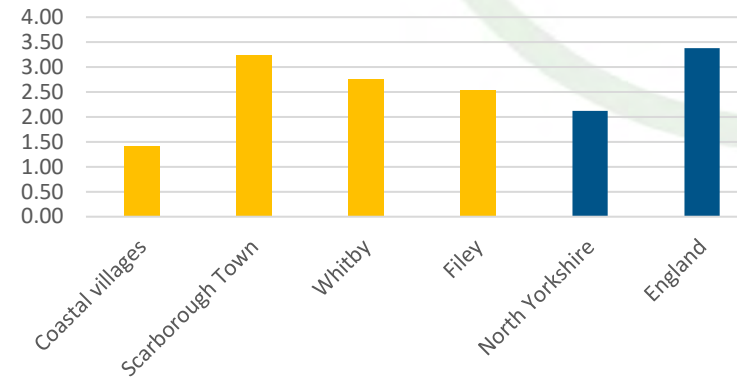


Place – Economic inactivity

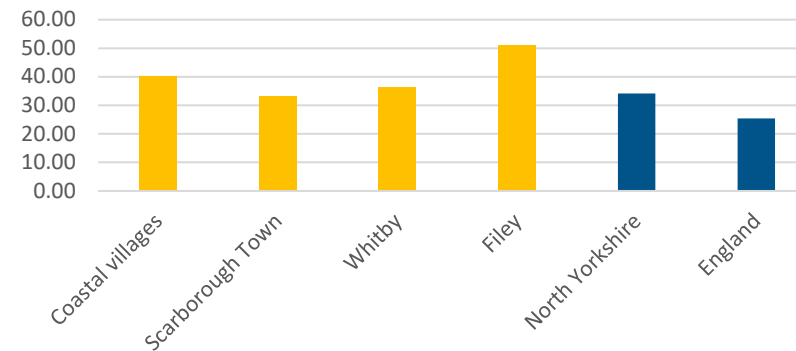
Scarborough town has the highest level of economically inactive unemployment at 3.23% exceeding the North Yorkshire rate (2.12%) while remaining broadly in line with the national average (3.38%)

Retirement-driven economic inactivity is highest in Filey (50.89%) more than double the England average (25.42%). Coastal villages (40.22%) and Whitby (36.25%) are also above the North Yorkshire average (34.17%). Scarborough (32.94%) is closer to the county average but remains above the national rate.

Economically inactive: unemployed

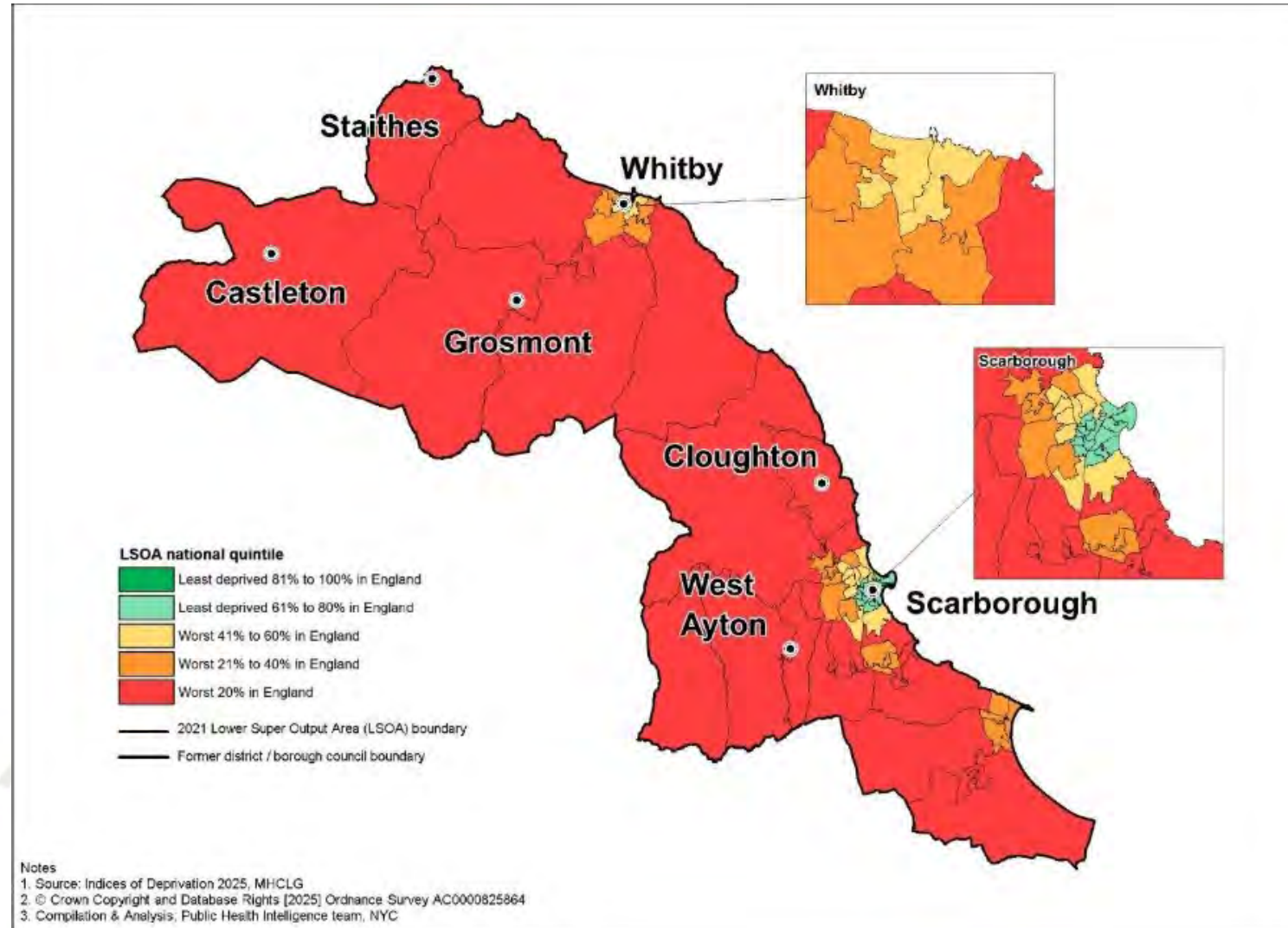


Economically inactive: retired



Place – Transport

Geographical barriers to services sub domain IoD 2025



Next steps and links with HDRC

- Insights from the HNA will be used to guide interventions and resources to address the greatest needs
- Strengthen partnership with HDRC to enable deeper research into area of greatest challenge
- Building resilient communities to adapt to future challenges.

Thanks for listening!

**If you want to find out more about working with
HDRC North Yorkshire please contact us as**

HDRC@Hull.ac.uk



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Young people in coastal communities and mental health



Dr Emily Murray

Director of the Centre for Coastal
Communities

University of Essex



Young people in coastal communities & mental health

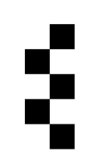


Dr Emily T. Murray, PhD FHEA (She/her)

Director of the Centre for Coastal Communities and Reader,
Institute of Public Health and Wellbeing, University of Essex

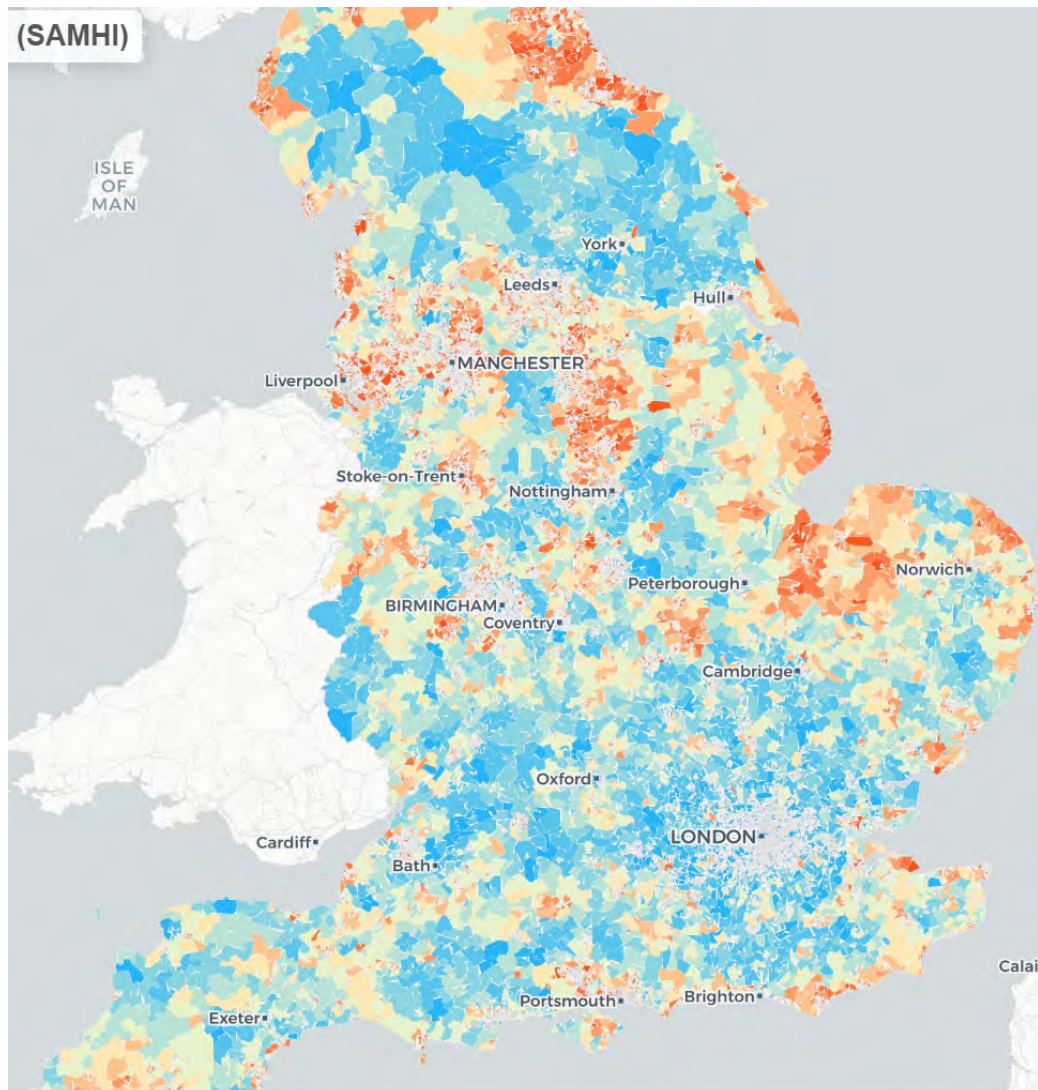
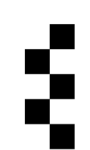
Email: Emily.murray@essex.ac.uk

18th March 2026



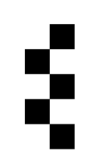
Youth Mental health in England

- 1 in 5 children and young people in England have a probable mental health disorder.
- These percentages have doubled since 2010, with adolescents and young people showing the sharpest increases across multiple national data sets.
- NHS mental health referrals for children and young people increased by 50% between 2020 and 2023.



Prevalence mental health (all ages):

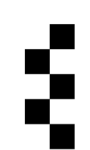
- Not spread evenly across England.
- Clustering of higher prevalence in urban centres and specific coastal areas.
- But...no publicly available small area-level data on the prevalence of mental health in only young people (map is all ages).



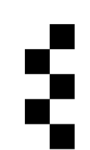
Background

- CMO report: worst health and wellbeing outcomes in England
- The report showed a high prevalence of disease and health risk factors in coastal areas, including mental health (also heart disease, diabetes, cancer, and Chronic Obstructive Pulmonary Disease).
- Some effect likely due to coastal areas containing high proportions of older people, but CMO report showed highest prevalence where populations were relatively young.





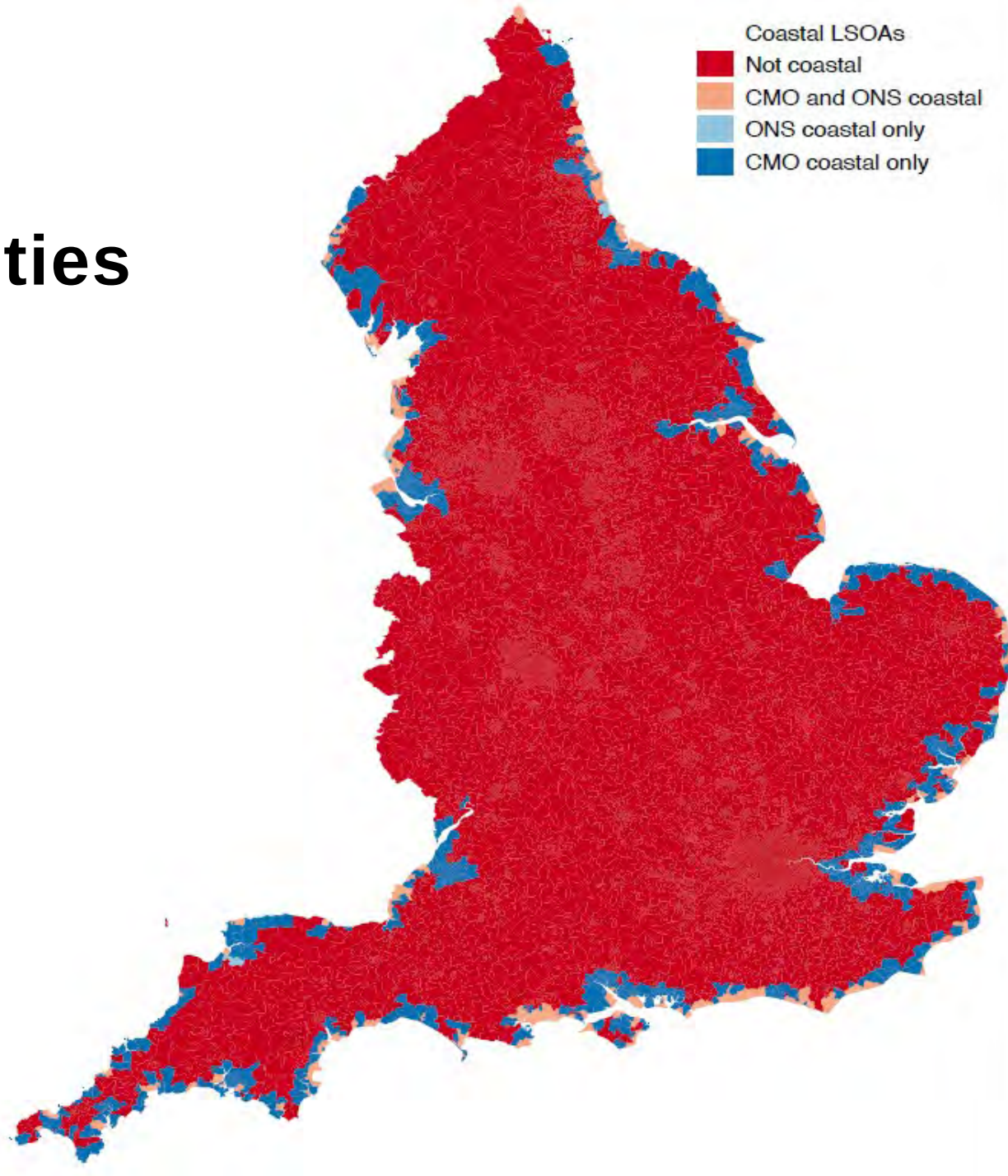
Do coastal youth have worse mental health than their peers inland?



Exposure: Coastal communities

1. Chief Medical Officer (CMO) report

- Geography: Lower-Super Output Areas 2011 (neighbourhoods)
- 32,844 LSOA's located in England
 - -> **6,344 LSOAs classified as 'Coastal'**
 - defined as those which include or overlap built-up areas which lie within 500m of the "Mean High Water Mark" (excluding tidal rivers)



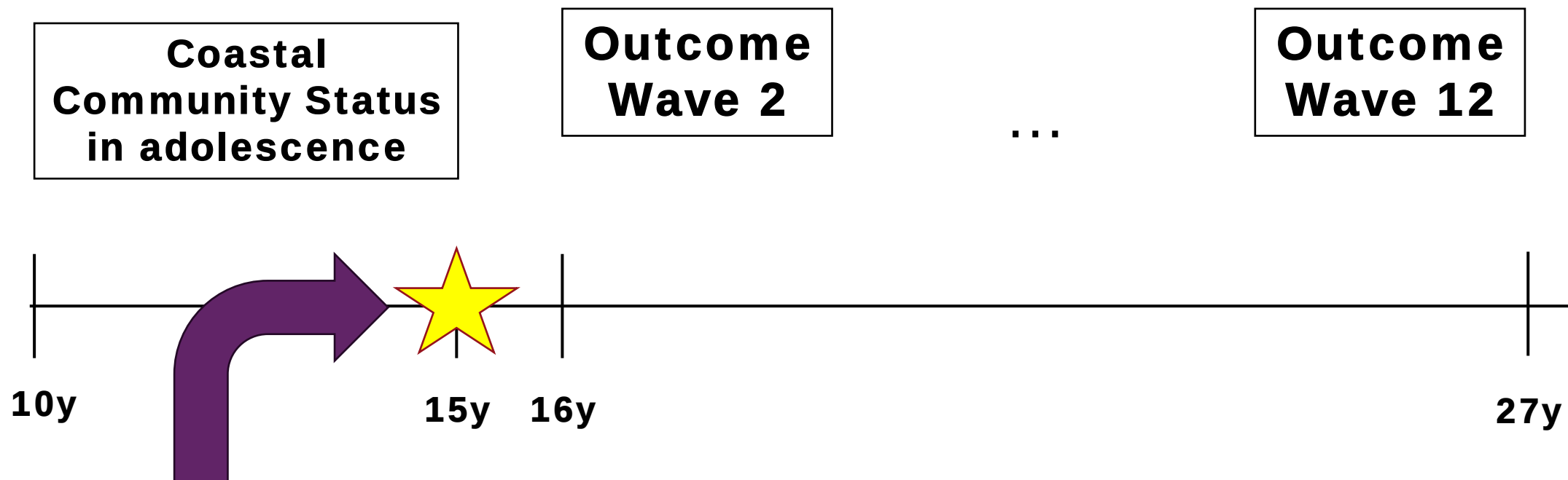


Mental health outcome:

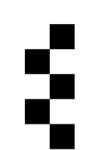
- Mental functioning
 - 6 questions, over last 4 weeks.
 - Score 0 (low functioning) to 100 (high functioning)



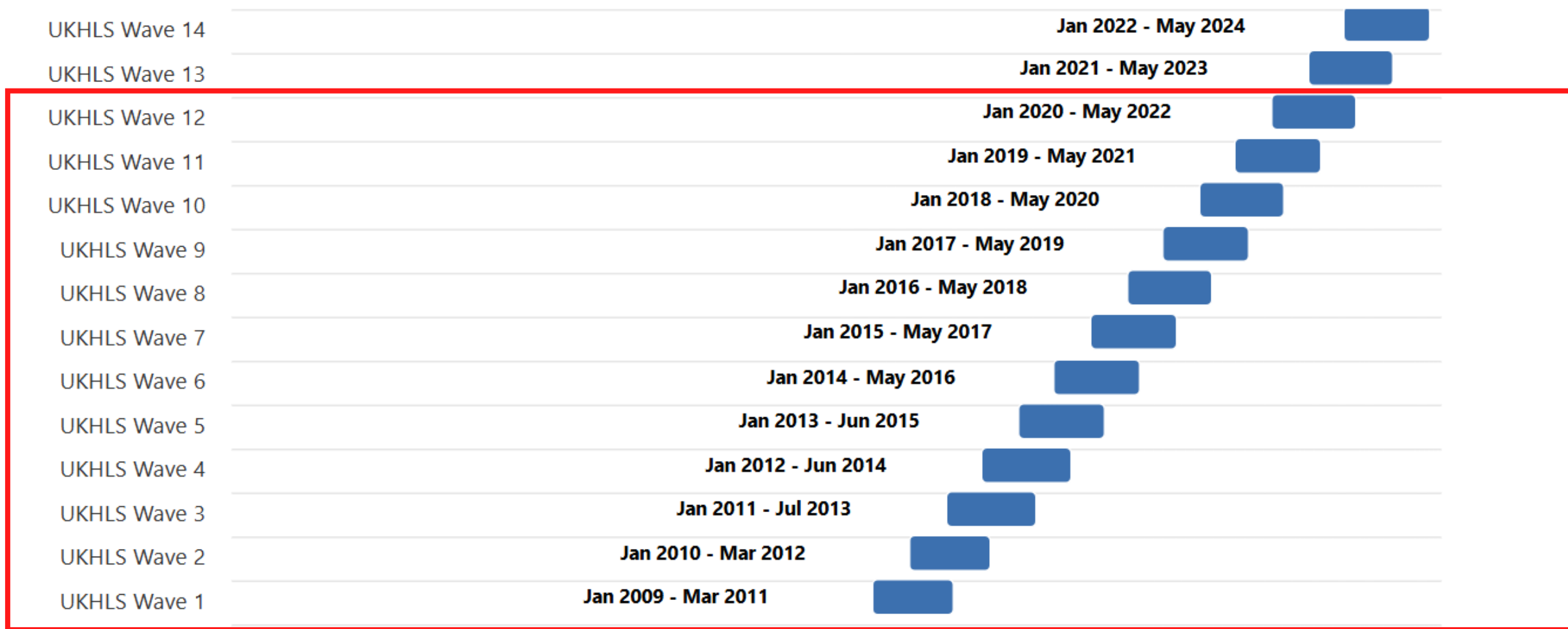
Understanding Society data set: An 11-year follow-up

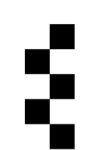


*Adolescence
Age 15y if available (45%)...
or infill backwards (14y: 17%, 13y: 11%, 12y: 10%, 11y: 9%, 10y: 8%)

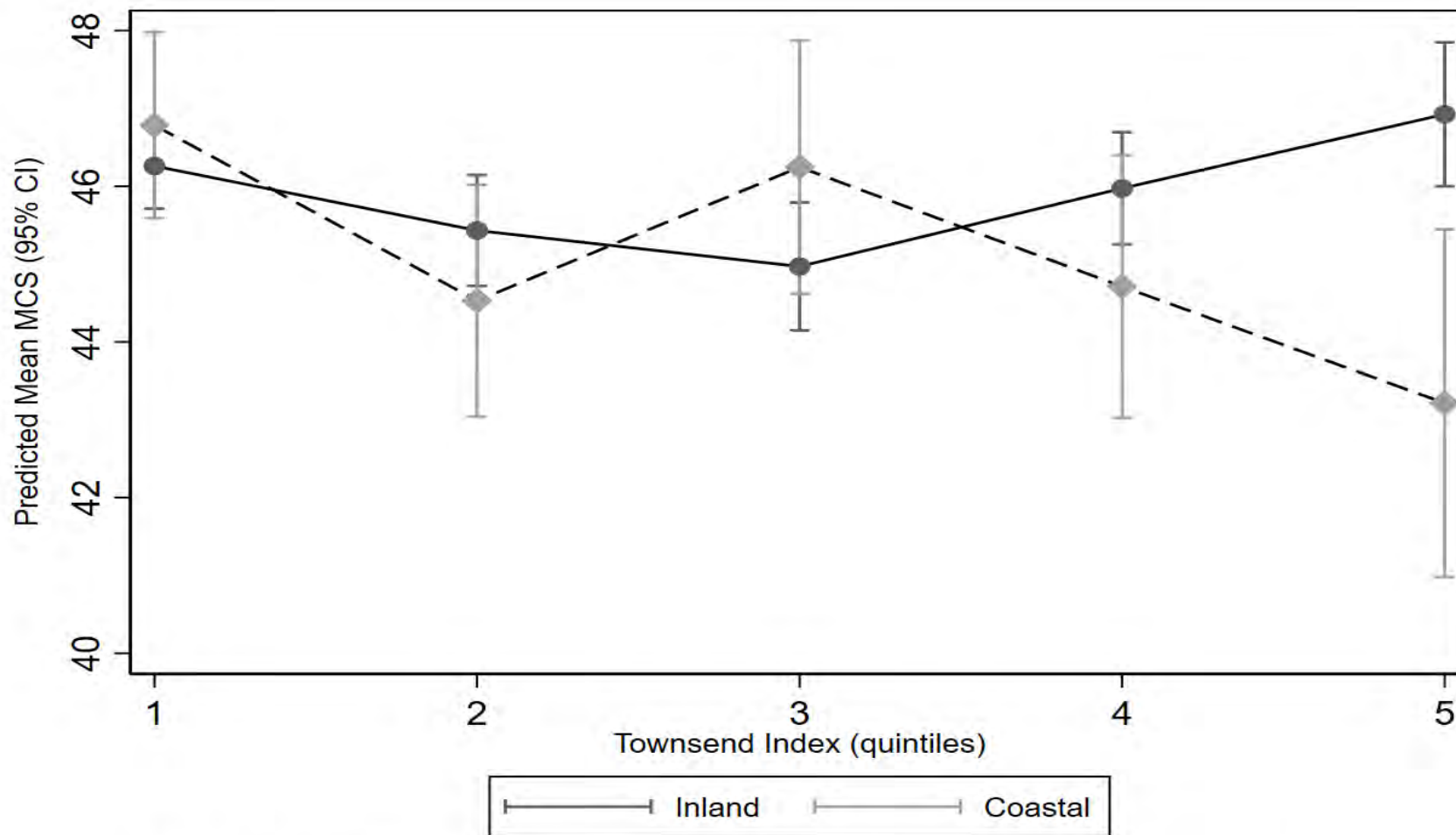


Understanding Society: Survey timeline





Mental functioning in adulthood (16+) by Coastal Community type and are deprivation in adolescence (aged 10–15 years)



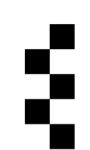
Source: UKHLS 2009-2022, n=4,921 (observations=18,324)

*Adjusted for age at health measurement and age 15y: Townsend index, sex, ethnicity household income (OECD-adj), and tenure.

In top 20% most deprived neighbourhoods, coastal youth had average mental functioning scores -3.70 ($-6.44, -0.96$) lower than their inland peers.

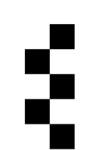
ALSO:

- Higher psychological distress (GHQ-36)
- Limiting long-term illness, impairment or disability.



Do coastal youth have worse mental health than their peers inland?

- Is it something specific about living in a coastal environment?
- Is it the economic challenges of people who live in these communities?
- Is it access to mental health services?



Social & Environmental Determinants?

- Coastal towns were once thriving centres of commerce, but many have experienced stark economic declines in recent decades.
- Those experienced industrial decline (e.g., seaside holidays, fishing, and shipbuilding) have worsened socio-economic problems.
- high deprivation levels => a reliance on a seasonal economy, outward migration of young people, transient populations, poor quality housing + physical isolation + Inward migration of older people



Total 32,844	Inland 80.7%	Coastal 19.3%	Different in Coastal Communities?
<u>Economic environment:</u>			
Mean Townsend index			↑
Unemployment, %			↑
Economic inactivity, %			↑
Mean Gross Value added			↑
<u>Social environment:</u>			
Qualifications 3+, %			↑
Low skilled occupations, %			↑
Mean Index of Depr. Crime score			↑
<u>Educational environment:</u>			
Attainment KS4, %			↑
Progression (POLAR 4), %			
Quintile 1 (ref)			↑
Quintile 2			↑
Quintile 3			-
Quintile 4			↑
Quintile 5			↑

Built environment:	Different in Coastal Communities?
Urbanicity	↑
Density (persons per hectare)	-
<u>Travel time/distance:</u>	
GP	↑
Hospital	↓
Further education	↑
Food stores	↓
Fast food/pubs	-
Gambling/tobacco shops	↓
Leisure	↑
Large employment/job centre	↑
Nearest rail station	↑
Green space	↓
<u>Annual air pollution:</u>	
Nitrogen dioxide (µgm ³)	↓
Particulate Matter 10 (µgm ³)	↓
Sulphur Dioxide (µgm ³)	↑

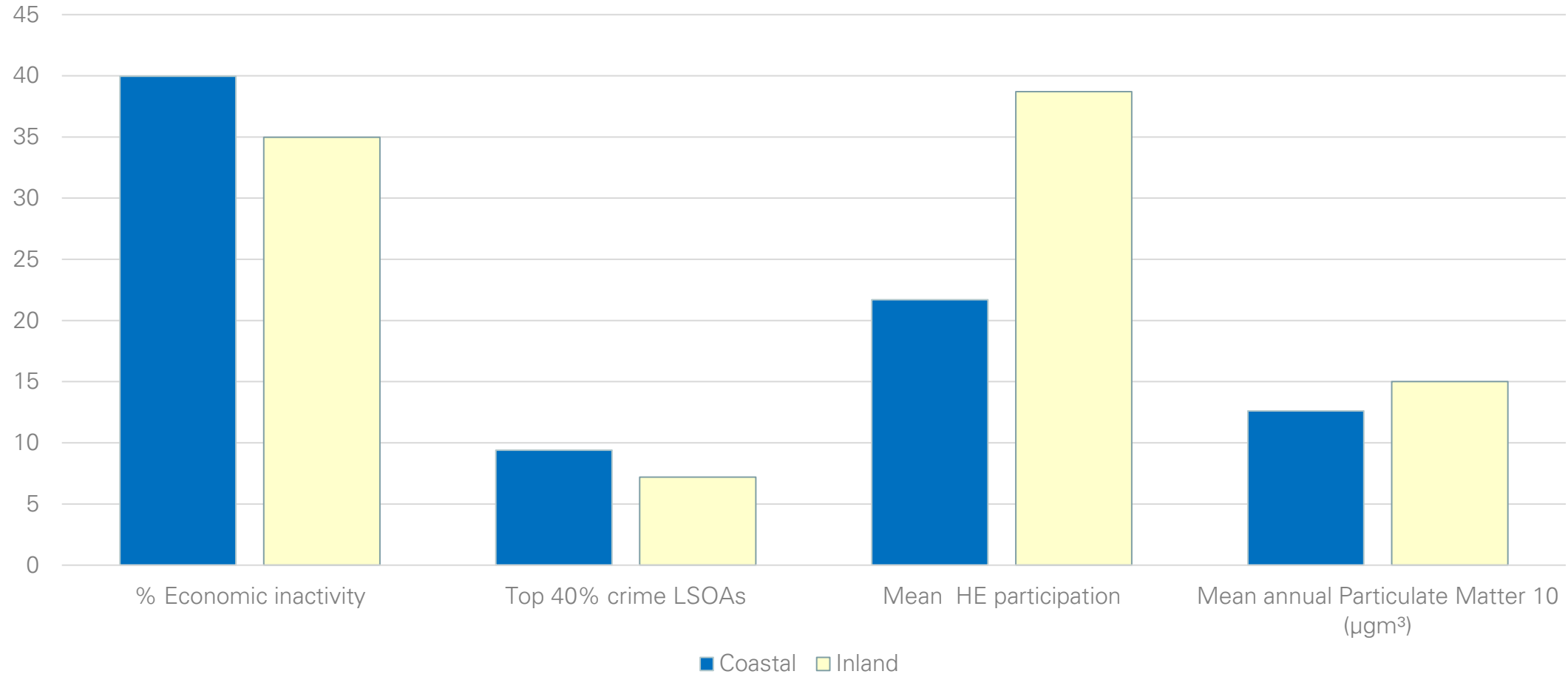
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Mean Gross Value added			↑
<u>Social environment:</u>			
Qualifications 3+, %			↑
Low skilled occupations, %			↑
Mean Index of Depr. Crime score			↑
<u>Educational environment:</u>			
Attainment KS4, %			↑
Progression (POLAR 4), %			
Quintile 1 (ref)			↑
Quintile 2			↑
Quintile 3			-
Quintile 4			↑
Quintile 5			↑

ii) Are these differences seen within sub-categories of area deprivation (i.e., exposure)?

- Same patterns for local areas where survey members lived in adolescence.
- Same pattern for the top 20% most deprived local areas.

ii) Are these differences seen within sub-categories of area deprivation (i.e., exposure)?

Average values for the top 20% most deprived English Coastal vs Inland lower-super output areas, 2011 (n=3,426)



Total	Inland	Coastal	
32,844	80.7%	19.3%	

Different in Coastal Communities?

Economic environment:

Mean Townsend index



Unemployment, %



Economic inactivity, %



Mean Gross Value added



Social environment:

Qualifications 3+, %



Low skilled occupations, %



Mean Index of Depr. Crime score



Educational environment:

Attainment KS4, %



Progression (POLAR 4), %

Quintile 1 (ref)



Quintile 2



Quintile 3

-

Quintile 4



Quintile 5



Built environment:

Urbanicity



Density (persons per hectare)

-

Travel time/distance:

GP



Hospital



Further education



Food stores



Fast food/pubs

-

Gambling/tobacco shops



Leisure



Large employment/job centre



Nearest rail station



Green space



Annual air pollution:

Nitrogen dioxide (μgm^3)

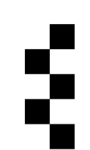


Particulate Matter 10 (μgm^3)

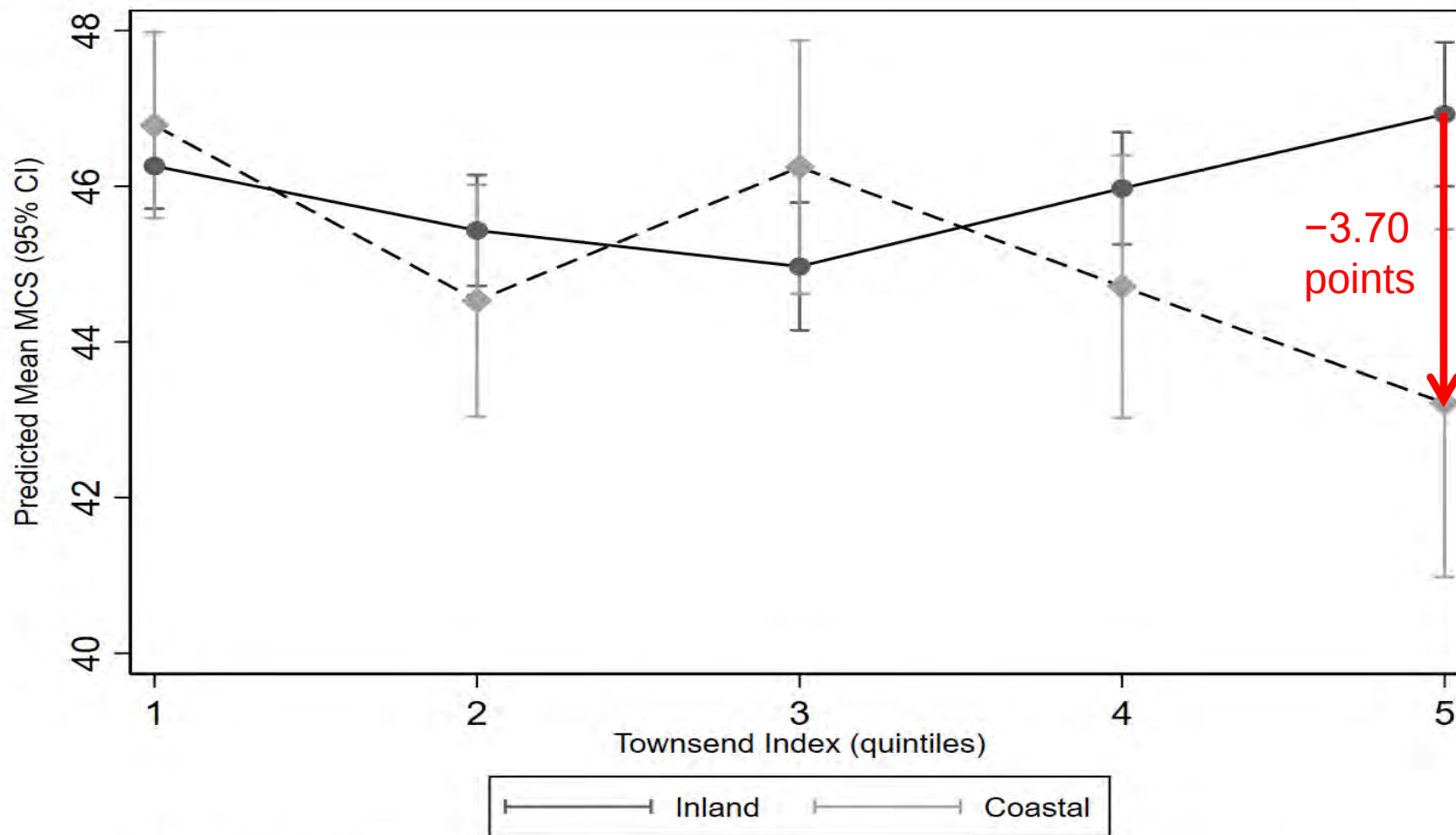


Sulphur Dioxide (μgm^3)





Mental functioning in adulthood (16+) by Coastal Community type and are deprivation in adolescence (aged 10–15 years)



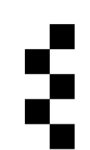
16% explained by Sex, ethnicity, HH income & tenure

8% explained by average neighbourhood participation in higher education.

74% left to explain

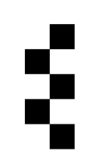
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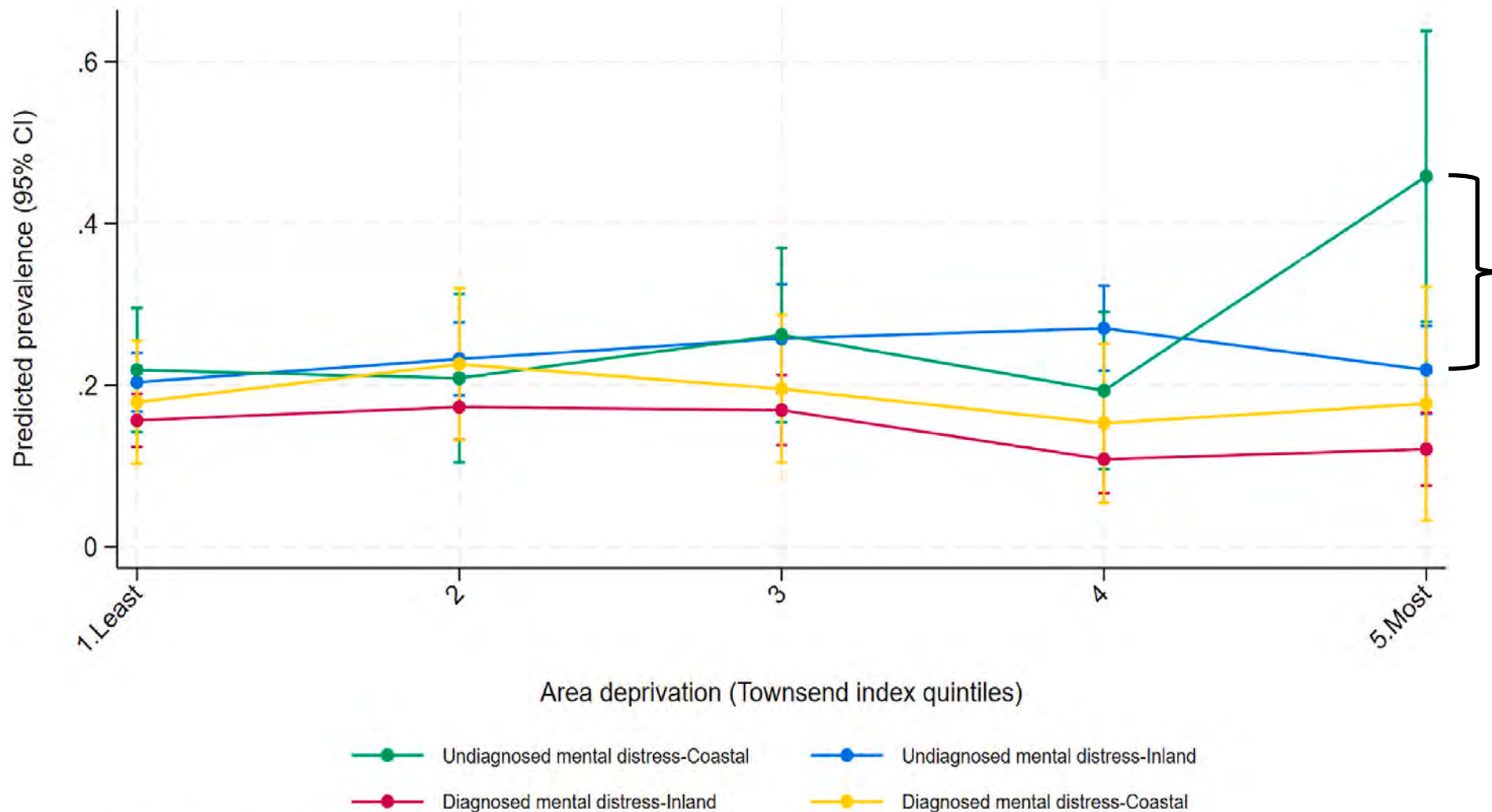


Is it the place or the people in the places?

- Is it something specific about living in a coastal environment?
- Is it the economic challenges of people who live in these communities?
- **Is it access to mental health services?**



Predicted prevalence of undiagnosed and diagnosed mental distress by area type in subsample of young adults (16–24 years).



Prevalence undiagnosed mental distress:
- most deprived coastal vs most deprived inland= 2.37x

- most deprived coastal vs least deprived inland= 3.41x

Source: UKHLS 2018–2023, n=28,549 (observations=3,615)

*Adjusted for sex, area deprivation, area deprivation*coastal, household income, tenure and race/ethnicity.

<https://doi.org/10.1016/j.healthplace.2025.103501>

CONCLUSIONS:

- Our research shows that young adults residing in the most deprived coastal areas of England face a double whammy of poor mental health.
- They are both more likely to rate their mental health lower, and live with an undiagnosed mental health condition, than if they had lived inland.
- The primary explanation (so far) is the economic and social challenges that people face who live in these communities. Household incomes and private renting are key factors.
- Further enquiry is needed to identify reasons for the remaining

NIHR Mental Health Leader Award



[Five-year project](#) led by [Professor Susan McPherson and Professor Vicky Bird:](#)

- work with the local community and mental health care providers in the region to understand what improvements can be made.
- Topic: Loneliness and social isolation in young adults living in coastal communities (across Essex, Southend and Thurrock)

CENTRE FOR COASTAL COMMUNITIES



Emily T. Murray, MSc PhD FHEA (She/her)

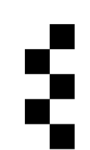
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PUBLICATIONS:

- Emily T Murray, Avril Keating, Cara Booker, Claire Cameron, Sam Whewall, Stephen Jivraj. **Is it the place or the people in the places? Exploration of why young people in deprived coastal communities of England have worse mental health than their peers inland.** Wellbeing, Space and Society 2025, 100307 <https://doi.org/10.1016/j.wss.2025.100307>.
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QUESTIONS?

Young people in coastal communities & mental health



Dr Emily Murray

Director of the Centre for Coastal Communities
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The Health Determinants Research Collaboration North Yorkshire: Understanding and addressing health inequalities in coastal communities



Dr Jane Deville Hull York Medical School



Rachel Maw North Yorkshire Council



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