From a Coastal Childhood Two British Birth Cohorts Find No Added Health Burden

A recent study published examines whether coastal residence at ages 16 and 42, and movement between coastal and inland areas during that period, are associated with multimorbidity in midlife in England and Wales.

Study

The relationship between coastal residence and health in Britain is subject to two contrasting perspectives. Some studies indicate that proximity to the coast is associated with mental and general health benefits, potentially due to restorative environments, healthier lifestyles, increased social interaction, and reduced pollution. This aligns with the historical development of British coastal towns as health resorts based on beliefs about the therapeutic effects of salt air, seawater, and sea bathing.

In contrast, other research links coastal living to poorer health outcomes, including higher rates of non-communicable diseases and lower self-reported health, particularly in socioeconomically deprived areas. These adverse patterns are often attributed to aging populations, persistent disadvantage, economic decline following the loss of traditional industries, limited employment opportunities, and geographic isolation. Environmental threats such as climate change and water pollution compound these challenges.

A major source of inconsistency in the evidence arises from varying definitions of coastal residence. Distance-based measures may blur distinctions between coastal and non-coastal living, while binary or built-up area classifications may reduce some misclassification but still group highly diverse coastal settlements together.

There is a notable absence of robust, individual-level longitudinal research examining self-reported, doctor-diagnosed health outcomes such as multimorbidity. The evolution of health effects across the life course and during periods of socioeconomic transition, including the impact of selective migration and changing community structures, remains insufficiently explored.

Findings

The 1958 National Child Development Study (NCDS) and the 1970 British Cohort Study (BCS) both followed the lives of about 17,000 people born in a single week of 1958 or 1970 in England,

Wales, or Scotland. Participants were tracked through adulthood, with data collected on health, social development, and economic circumstances. For this analysis, data were used for those living in England or Wales from birth to midlife: age 55 in the NCDS and age 46 in the BCS. The analyses included 13,691 NCDS and 14,683 BCS participants, with multiple imputation used to address missing data.

The researchers identified coastal residence by linking participants' postcodes at ages 16 and 42 to the Office for National Statistics classification of built-up areas in England and Wales.

Multimorbidity was assessed by counting 9 self-reported, doctor-diagnosed physical and mental health conditions in the 4–5 years preceding age 55 (NCDS) and 46 (BCS). These conditions were asthma, diabetes, backache, cancer, hearing problems, high blood pressure, eye disease, heart problems, and depression. Individuals with two or more conditions were considered to have multimorbidity.

Migration between coastal and non-coastal areas was measured by changes in residence status between ages 16 and 42. Four migration categories were defined: Remained inland, remained coastal, moved to the coast, and moved away from the coast. Because residence was recorded at only these two ages, the categories do not provide complete migration or residential histories.

Control variables included neighborhood deprivation, measured using Townsend index deciles at ages 16 and 42, and socioeconomic position, based on father's social class at birth, as well as sex at birth. Additional models adjusted for multimorbidity at age 42. Social class was grouped into six categories, with 5% of NCDS and 7% of BCS respondents unclassified.

Coastal residence during adolescence was not associated with a higher risk of multiple health conditions in midlife in either cohort. Among NCDS participants, coastal residence at age 42 was associated with 22% higher odds of multimorbidity at age 55 before adjustment, but the association was attenuated after accounting for neighborhood deprivation. No comparable association was found in BCS. The follow-up from the coastal assessment at age 42 to the outcome was 13 years in NCDS and four years in BCS. Adjusting for multimorbidity at age 42 did not materially alter these findings.

Those who moved away from the coast between adolescence and adulthood had the lowest predicted probability of multimorbidity, at 25% in NCDS and 13.68% in BCS, while those who moved to or remained on the coast generally had higher predicted probabilities. This pattern was consistent in both study groups and supports a role for selective migration, but it does not show that leaving the coast improves health. Not all differences between the other migration groups were statistically significant.

Migration analysis showed that people who remained in coastal areas at adolescence and adulthood tended to live in more deprived neighborhoods than those who remained in inland areas. The likelihood of staying on the coast increased with neighborhood deprivation, leading coastal residents to generally experience greater socioeconomic disadvantage. This trend was observed in both the NCDS and the BCS, with a stronger association in the BCS.

People who moved to coastal areas in both cohorts tended to come from less-deprived neighborhoods. In the BCS, adults who moved to coastal areas often settled in more deprived neighborhoods, whereas the corresponding age-42 association was not statistically significant

in NCDS. Conversely, people who left coastal areas in both cohorts were more likely to be living in less-deprived neighborhoods by age 42.

Conclusion

This study suggests that health disadvantage in coastal communities in England and Wales is associated with both socioeconomic deprivation and selective migration patterns over the life course. These factors may help explain the concentration of multimorbidity within some coastal communities, but the observational findings do not establish causal effects.

Several limitations should be considered, including residence being recorded only at ages 16 and 42, possible misclassification of coastal areas, the grouping of diverse coastal settlements into one category, different outcome ages, and the absence of heart problems from the age-42 BCS multimorbidity measure, and reliance on self-reported conditions, which may affect the findings. Under-reporting may also be more common among socioeconomically disadvantaged participants, potentially underestimating multimorbidity in coastal communities.

Future research should address these limitations to strengthen the evidence base. Policymakers should use these insights to inform targeted public health strategies and more effective resource allocation in coastal regions, taking local needs and migration patterns into account.

Source:

https://www.news-medical.net/news/20260803/Two-British-birth-cohorts-find-no-added-health-burden-from-a-coastal-childhood.aspx