

# Towards healthy ageing: assessing the impact of healthcare access, quality, and universal coverage in Europe and the United Kingdom in 2019

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## Introduction

Recent evidence suggests an increase in global life expectancy (LE) but not necessarily healthy life, primarily due to the burden of non-communicable diseases and disabilities.<sup>1</sup> Projections from the WHO indicate that by 2050, the global population aged 60 and above will surpass the current figure of approximately 1 billion, more than doubling to reach 2.1 billion.<sup>2</sup>

This underscores the importance of quality health care which is easily accessible and sustainable through social development and universal health coverage. This study explored the potential influence of structural healthcare and social factors on trends in LE across Europe and the UK using population health data acquired from the Global Burden of Disease (GBD) Study 2019.

## Methods

The GBD 2019 study developed and validated three novel, standardised indices, namely, Healthcare Access and Quality (HAQ) Index (0-100), Universal Health Coverage (UHC) Index (0-100), and Sociodemographic (SDI) Index (0-1).<sup>3</sup>

This ecological study systematically examined the association of LE with these three indices across 27 EU countries and the UK in 2019, using correlation and multivariable linear regression analyses.

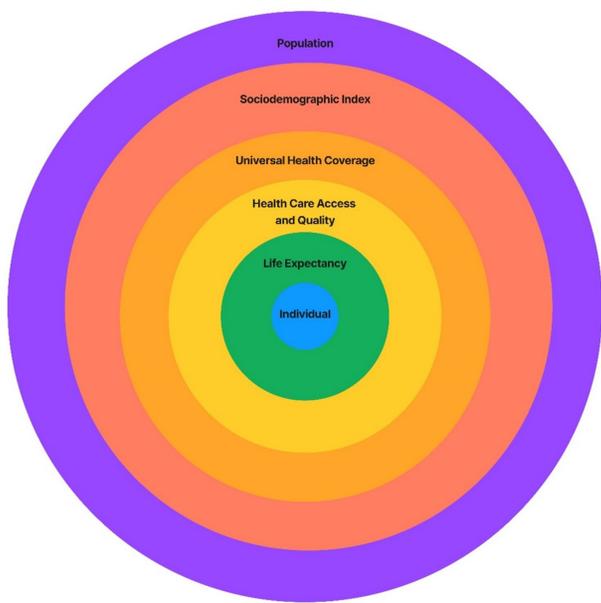


Figure 1: Bronfenbrenner Framework of Study Variables

## Results

In 2019, the UK and EU nations had an average LE of 80.1 years, with UHC, HAQ, and SDI scores of 82.5, 82.3, and 0.83, respectively. Across nations, LE ranged from 73.3 years in Bulgaria to 83.1 years in Spain and Italy, with Bulgaria having the lowest UHC index (62.6) and Luxembourg having the highest (91.5), while the Netherlands scored highest on the HAQ index (91.1) and Bulgaria the lowest (64.9).

Correlation analyses indicated strong positive associations between LE and HAQ ( $r=0.96$ ), UHC ( $r=0.94$ ), and a moderate correlation with SDI ( $r=0.41$ ). Multivariable regression analyses showed significant associations suggesting 2.3- and 1.3-year improvements in LE per 10% increase in HAQ and UHC, respectively, but no significant association with SDI.

## Results

Country	Life Expectancy	HAQ	UHC	SDI
Austria	82.2	87.97	86.37	0.85
Belgium	81.4	86.6	87.3	0.85
Bulgaria	73.3	64.86	62.56	0.76
Croatia	78.7	81.4	78.94	0.79
Cyprus	80.8	86.17	79.6	0.84
Czechia	79.5	81.49	81.94	0.83
Denmark	81.1	85.54	84.14	0.89
Estonia	78	76.45	82.04	0.83
Finland	81.9	87.75	91.35	0.85
France	82.9	88.02	90.77	0.83
Germany	81.2	86.98	86.25	0.90
Greece	80.9	83.88	80.14	0.79
Hungary	76.6	74.37	72.03	0.79
Ireland	82	90.08	90.35	0.86
Italy	83.1	89.6	88.9	0.80
Latvia	75.9	69.48	69.79	0.82
Lithuania	76.2	67.94	70.35	0.84
Luxembourg	82.9	87.51	91.46	0.89
Malta	82.6	85.1	82.88	0.80
Netherlands	81.7	91.05	89.59	0.88
Poland	78.1	73.2	72.66	0.80
Portugal	81.7	83.94	83.53	0.74
Romania	75.5	69.68	69.59	0.76
Slovakia	77.6	73.43	77.98	0.81
Slovenia	81.4	87.8	89.83	0.84
Spain	83.1	89.67	90.01	0.77
Sweden	82.8	90.38	90.36	0.87
UK	81.1	83.34	87.9	0.84
Mean:	80.15	82.27	82.45	0.83
STDEV:	2.73	7.78	8.08	0.04

Table 1: Life Expectancy, HAQ, UHC, and SDI rates in Europe in 2019

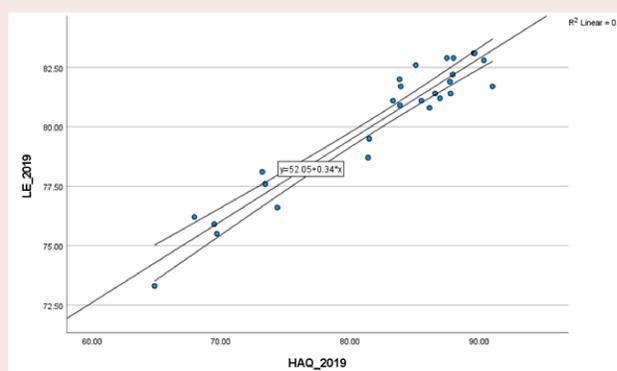


Figure 2: Correlation between LE and HAQ in Europe in 2019

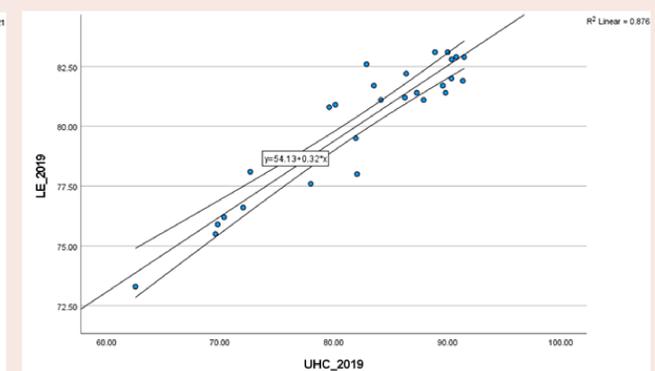


Figure 3: Correlation between LE and UHC in Europe in 2019

## Discussion

Our findings showed that HAQ and UHC are strongly correlated with and valuable predictors of overall LE in Europe, while SDI has a weaker relationship with LE. These findings suggest that improvements in healthcare access and quality and universal health coverage are positively associated with increased LE. This relationship has been validated in previous studies investigating the effects of healthcare access and coverage in countries outside the EU.<sup>4,5</sup>

Further research could first comprise of the cross-validation of our study's findings using alternative datasets and sources. Subsequently, a comprehensive analysis of the correlation between disability attributed to non-communicable disease burden and structural health care and social factors is recommended. This may comprise of the use of additional GBD metrics such as Disability-Adjusted Life Years and Years Lived with Disability.

Despite limitations, our findings highlight the importance of universal health coverage and quality healthcare access to help facilitate the promotion of healthy ageing in European nations. Overall, these results imply that EU policy makers and government bodies ought to prioritise the investment of resources into the expansion of healthcare access, quality, and coverage in addressing changing demographic patterns to improve overall population health and further increases in LE.

## References

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