

Health and socio-geographical disparities in post-COVID outcomes in adults aged 50+ in Europe: Has COVID-19 exposed divide between post-communist countries and the Western Europe?

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The National Institute for Research on Socioeconomic
Impacts of Diseases and Systemic Risks

European countries severely hit by COVID-19, with the death toll amounting to over two million as of May 2022.

The estimated excess mortality due to the COVID-19 pandemic was highest in Central and Eastern Europe.



Two million confirmed deaths from COVID-19 in the European Region

12 May 2022 | News release | Reading time: 1 min (297 words)

THE LANCET



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Articles

Estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality, 2020–21

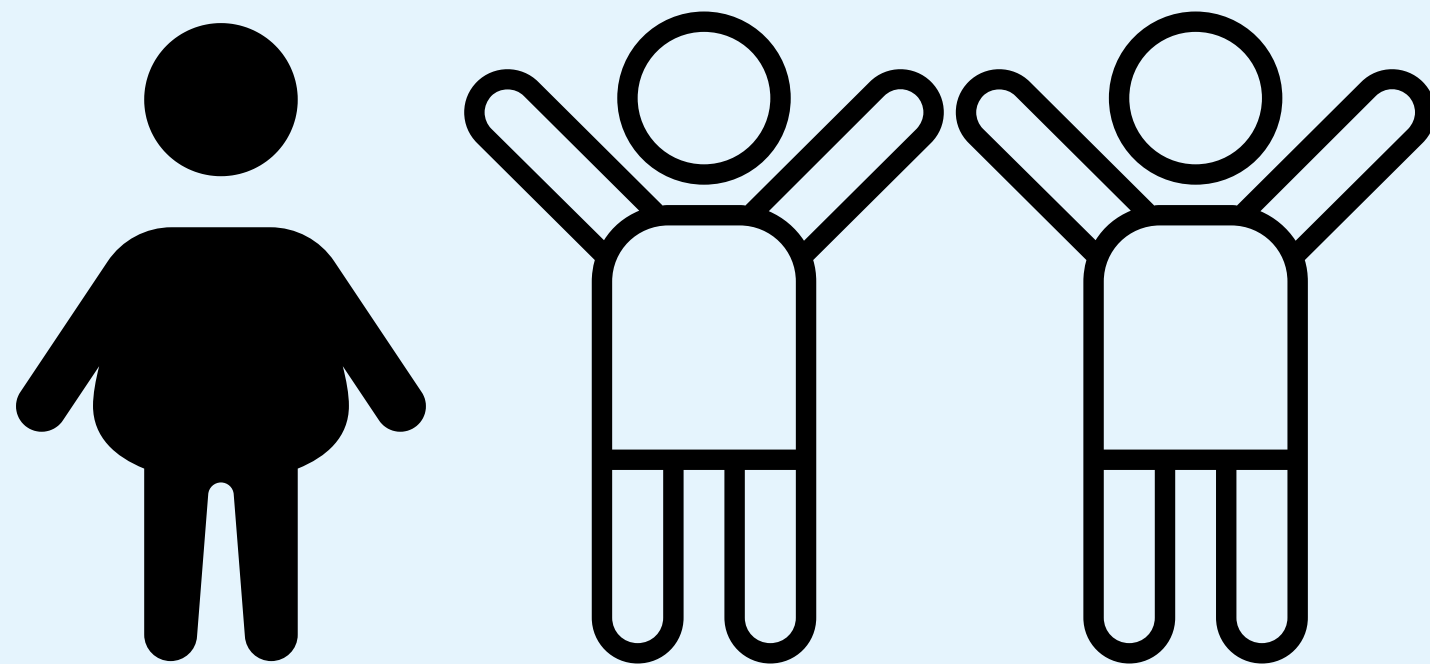
COVID-19 Excess Mortality Collaborators[†]

Background

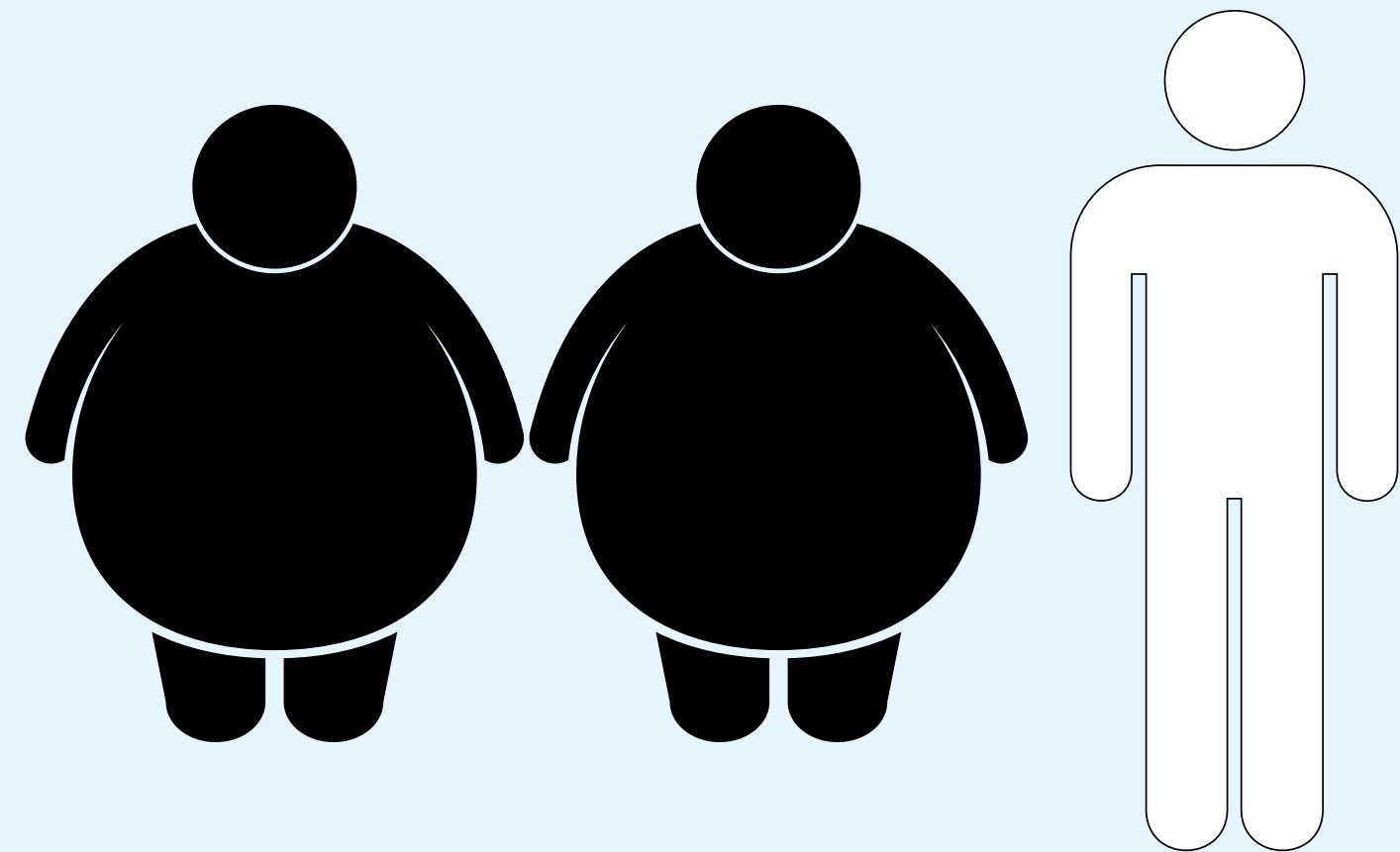
Prevalence of Overweight or Obesity

WHO EUROPEAN REGIONAL OBESITY REPORT 2022

Almost 1 in 3 children



Almost 2 in 3 adults



Our starting point...



nutrients

To investigate factors contributed to such severe outcomes from COVID infection in Europe

Article

Body Mass Index and Risk for COVID-19-Related Hospitalization in Adults Aged 50 and Older in Europe

Maika Ohno * and Dagmar Džúrová 

Higher body mass index (BMI) has been associated with a higher risk for severe COVID-19 outcomes. The aim of this study was to investigate associations among BMI, underlying health conditions and hospital admission as well as the effects of COVID-19 vaccines in adults aged 50 years and older in Europe using longitudinal data from the Survey of Health, Ageing and Retirement in Europe (SHARE) which was collected from June to August 2021, shortly after the second wave of the COVID-19 pandemic occurred in Europe.



Data source and inclusion criteria

Data source:

The Survey of Health, Ageing and Retirement in Europe (SHARE), longitudinal data from people aged 50 and older across 28 European countries and Israel.

- Aged 50 years and older
- A positive COVID-19 test
- Participate in the regular face-to-face Wave 8 and SHARE Corona Survey 2
- Available data for BMI, education and vaccination information
- Information on whether or not being hospitalized after infected with COVID



Article

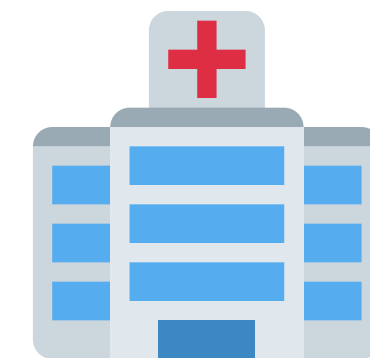
Body Mass Index and Risk for COVID-19-Related Hospitalization in Adults Aged 50 and Older in Europe

Maika Ohno *^b and Dagmar Dzúrová ^b

1936 individuals who had a positive test result before or during the survey period June-August 2021

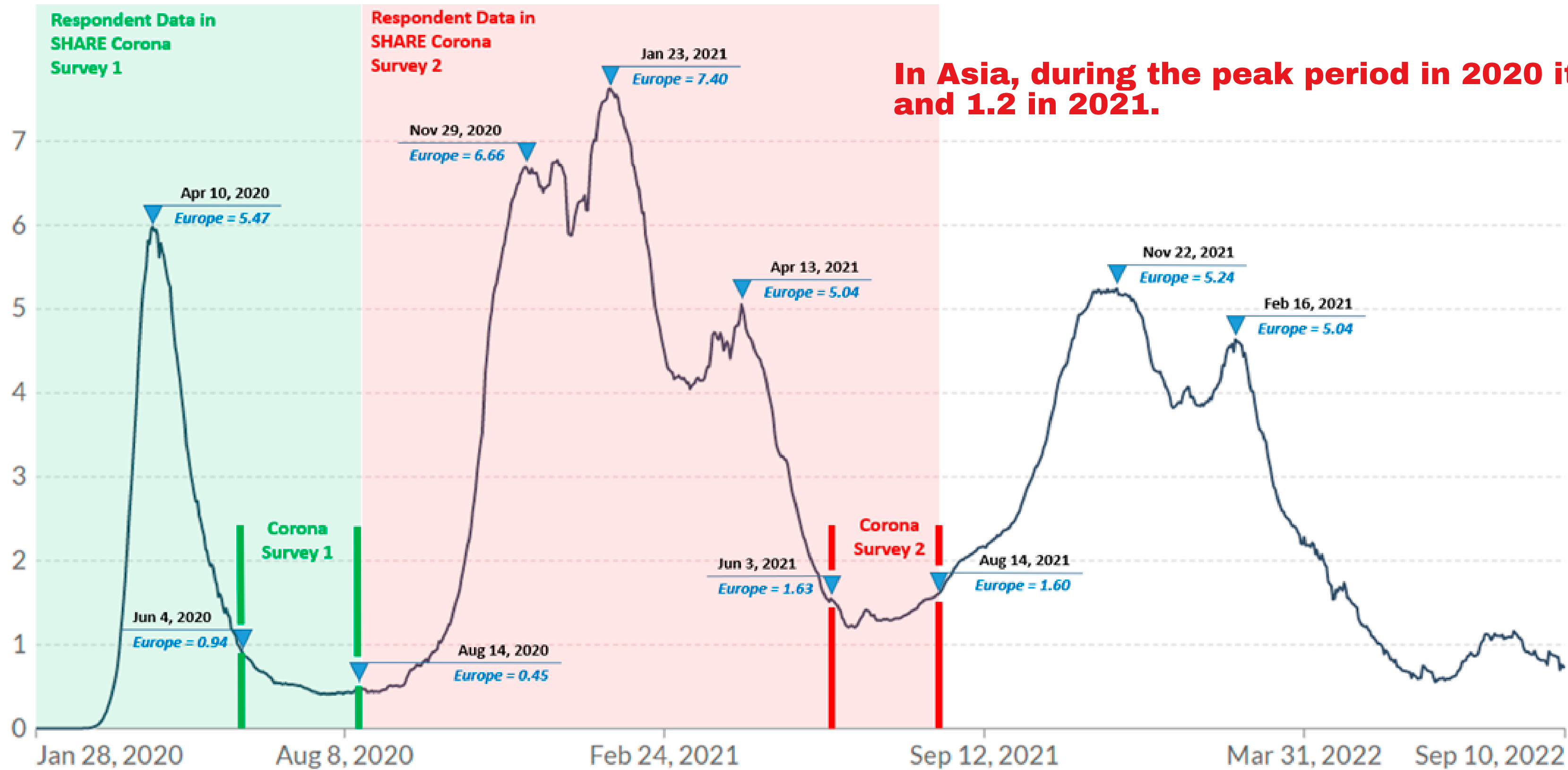


84% Not hospitalized



16% Hospitalized

Survey period



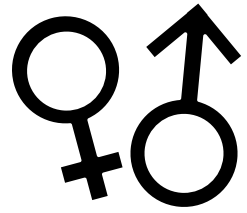
Daily confirmed COVID-19 deaths per million people (7-day rolling average)

Data from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University via Our World in Data with own modification indicating the survey period.

Results

Likelihood of hospital admission due to COVID infection in people aged 50+ in Europe

Odds ratio (95% CI)



Male

1.5 (1.18, 1.94)



70-79 years

2.1 (1.34, 3.29)

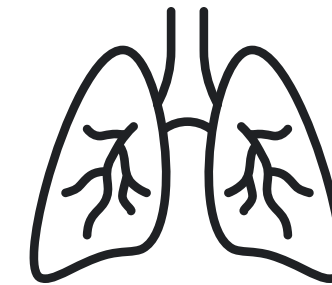
80+

4.0 (2.48, 6.62)



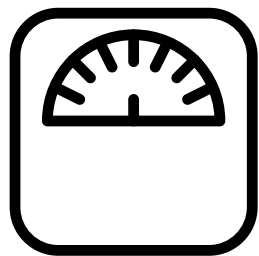
None and primary

1.8 (1.14, 2.80)



Chronic lung disease

3.0 (2.14, 4.40)



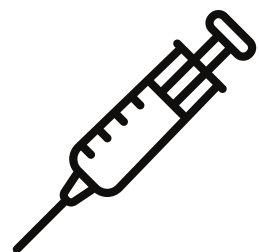
Obesity

1.5 (1.05, 2.05)



Diabetes

1.4 (1.02, 1.93)



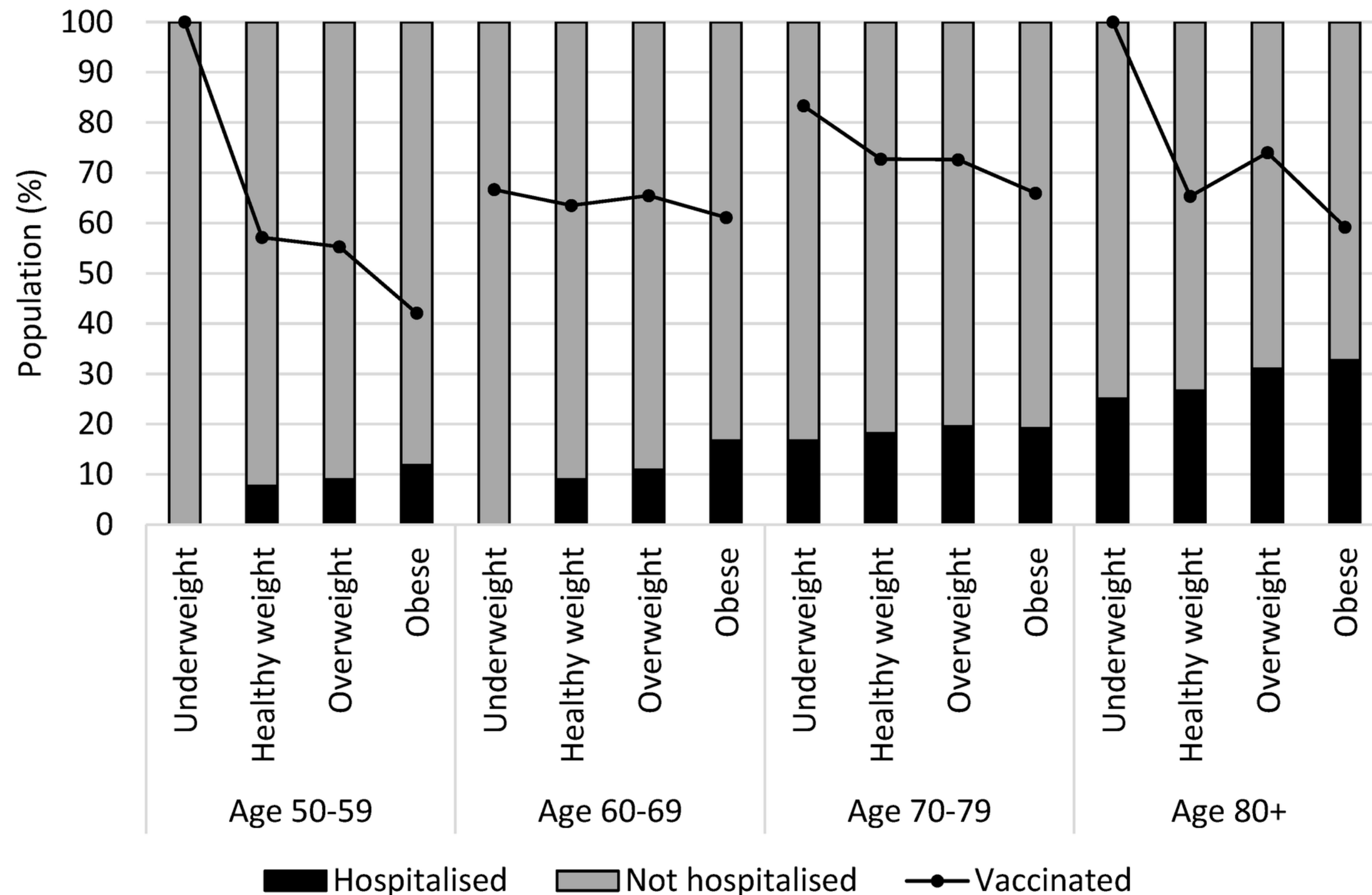
No vaccination

1.8 (1.34, 2.30)



Hospitalization and vaccination status by BMI and age groups.

- A linear increase in hospitalization with age and BMI.
- Lowest vaccination uptake among individuals with obesity in all age groups.



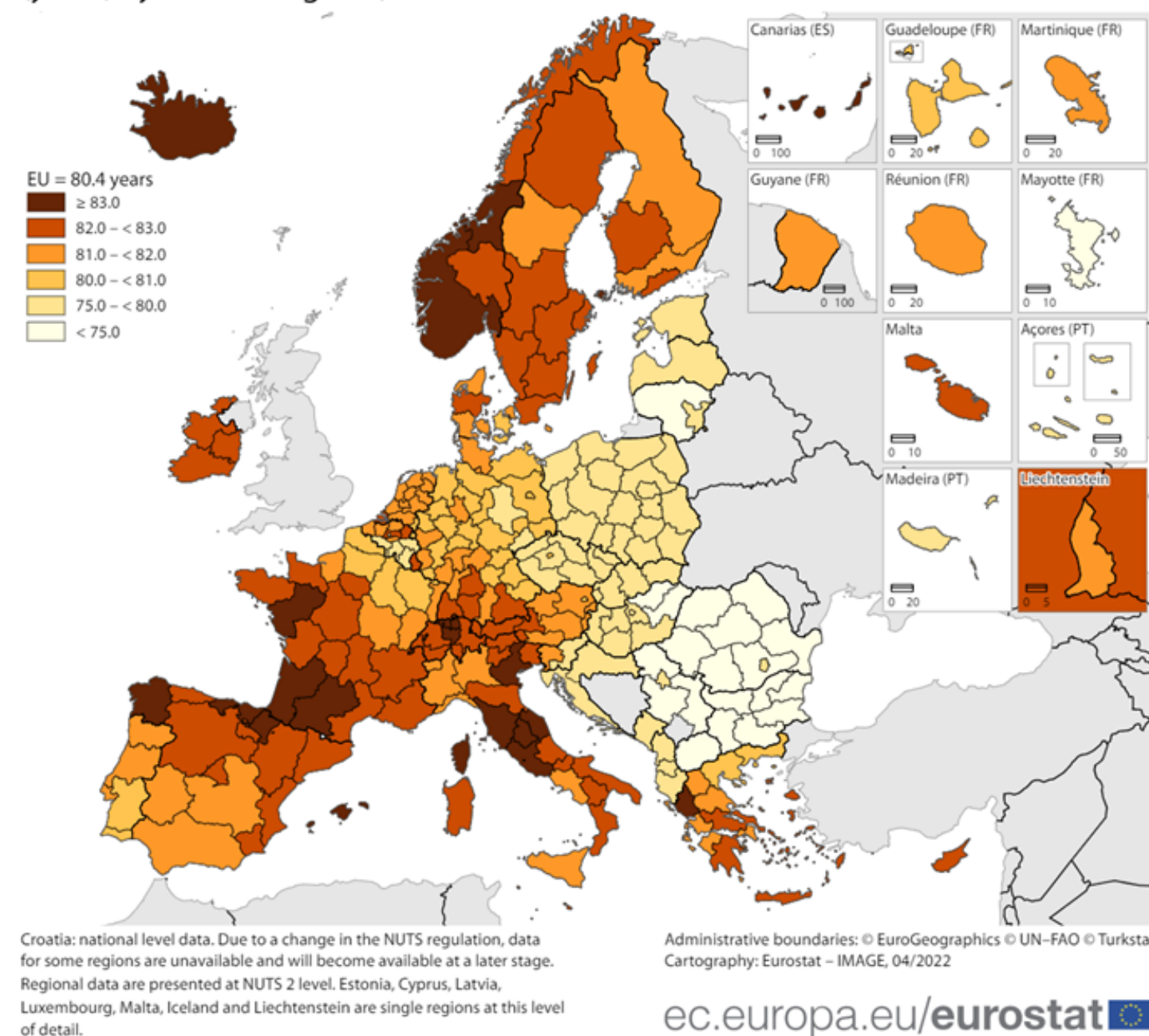


No statistically significant regional differences in the likelihood of hospitalization in this population.

What about long-COVID?

Situation before and during the COVID-19 pandemic

Life expectancy at birth, 2020
(years, by NUTS 2 regions)



Life expectancy did not recover in Central and Eastern European Countries in the following year.



September 2022

At least 17 million people in the WHO European Region experienced long COVID in the first two years of the pandemic; millions may have to live with it for years to come

WHO/Europe urges countries to take post COVID-19 condition seriously by urgently investing in research, recovery, and rehabilitation

13 September 2022 | Media release | Reading time: 4 min (1072 words)

Regardless of the severity of COVID-19 infection, people still suffer from lingering symptoms from the infection.

Original research

Health inequalities in post-COVID-19 outcomes among adults aged 50+ in Europe: has COVID-19 exposed divide between postcommunist countries and Western Europe?

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[PubMed articles](#) [Google scholar articles](#)

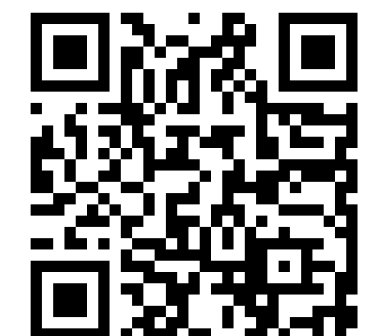
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[PubMed articles](#) [Google scholar articles](#)





Health inequalities in post-COVID-19 outcomes among adults aged 50+ in Europe: has COVID-19 exposed divide between postcommunist countries and Western Europe? 

⇒ Characteristics of individuals with post-COVID-19 condition in older people in Europe are still not well established.

Aim

To investigate protective health and socio-geographic factors for post-COVID 19 conditions also known as 'Long COVID' in adults aged 50 years and older in Europe.

Health inequalities in post-COVID-19 outcomes among adults aged 50+ in Europe: has COVID-19 exposed divide between postcommunist countries and Western Europe?



Data source

The Survey of Health, Ageing and Retirement in Europe (SHARE), longitudinal data from people aged 50 and older across 28 European countries and Israel.

Inclusion criteria

- Aged 50 years and older
- A positive COVID-19 test
- Participate in the regular face-to-face Wave 8 and SHARE Corona Survey 2
- Available data for BMI, education, vaccination and post COVID-19 symptoms

1909 individuals were included in the analysis.

Region was compared between **Visegrad group (Czechia, Poland, Hungary and Slovakia)** and other European countries.

Visegrad Group

- Poland
- Czechia
- Slovakia
- Hungary



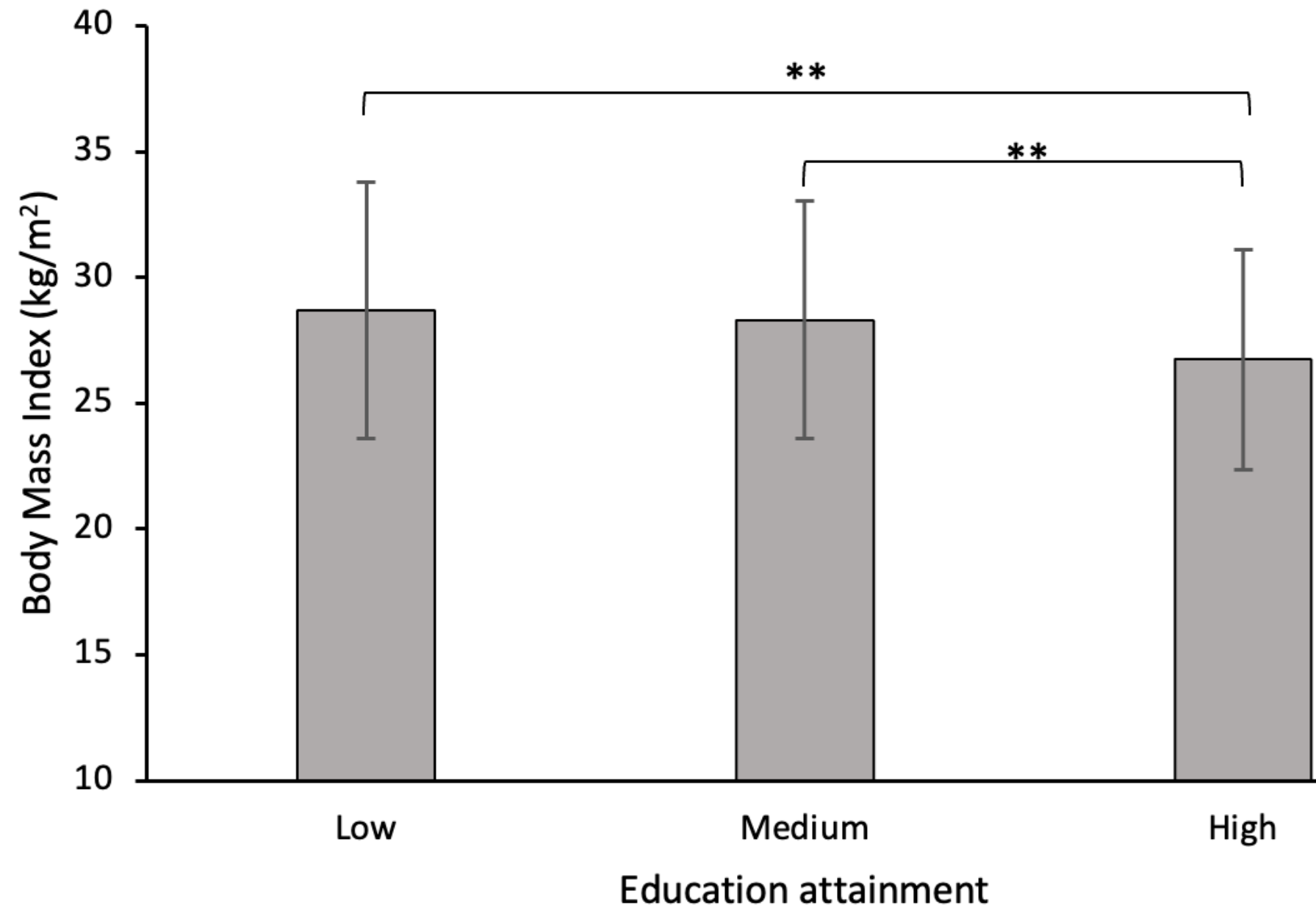


VARIABLE	OR	(95% CI)
Male (ref. Female)	1.54**	(1.24 to 1.90)
Tertiary or higher education (ref. Low)	1.42*	(1.05 to 1.92)
Healthy weight (ref. Obesity)	1.46*	(1.11 to 1.93)
No underlying health condition (ref. with underlying health condition)	1.68**	(1.31 to 2.15)
Vaccination (ref. Not vaccinated)	1.39*	(1.11 to 1.75)
Non-Visegrad group (ref. Visegrad group)	2.03**	(1.53 to 2.69)

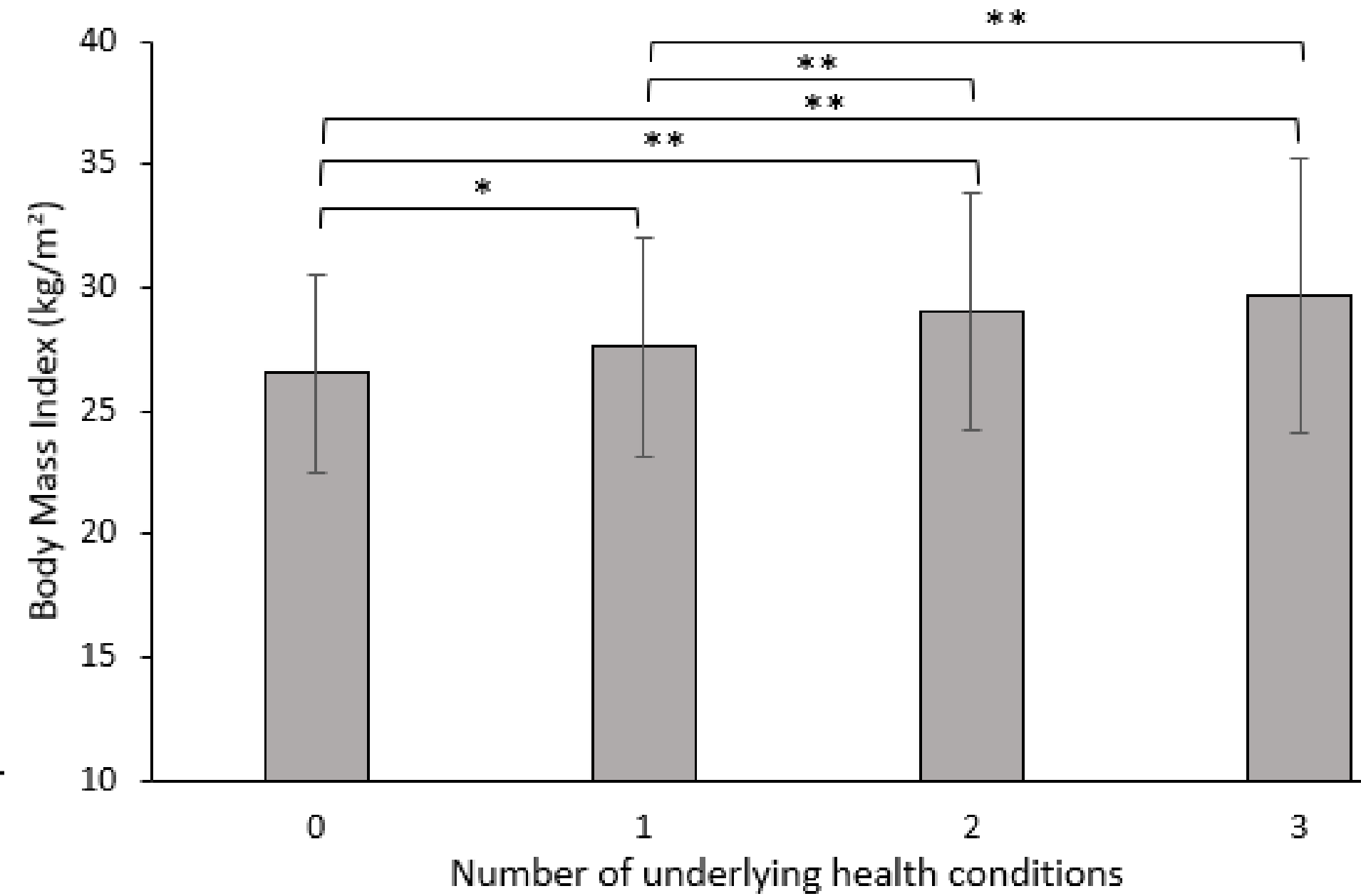
*p<0.05; **p<0.001.

Adjusted for sex, age, education, BMI, underlying health conditions, vaccination and region.

(A) Differences in BMI across different education groups (Low, Medium and High)

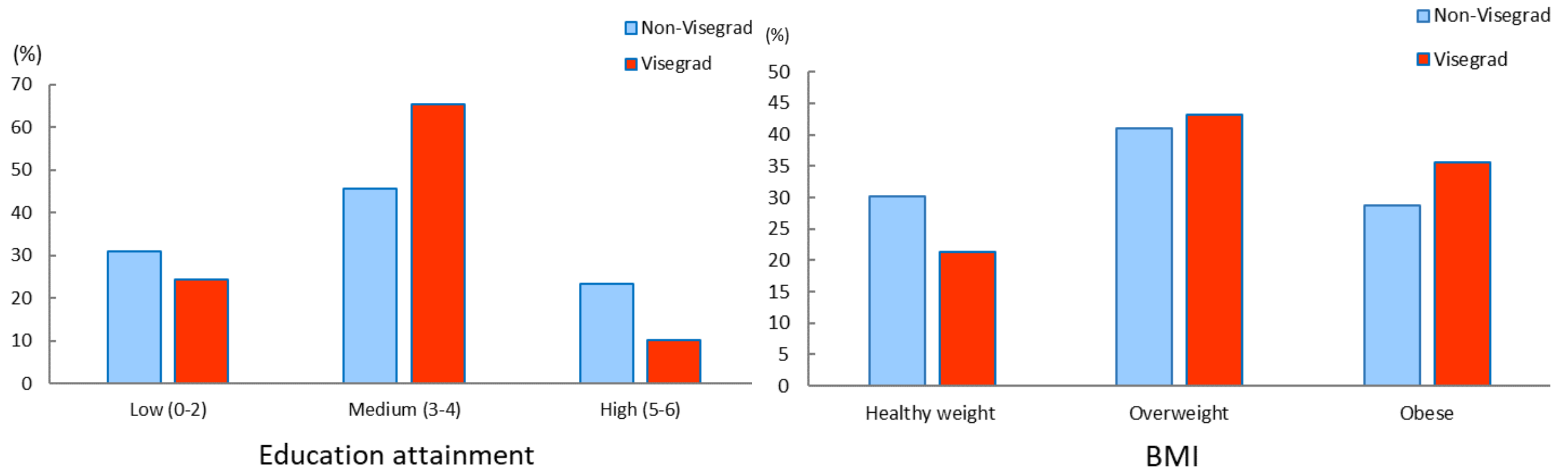


(B) Differences in BMI by the number of underlying health conditions (0, 1, 2 and 3 or more conditions)



* p < .01; ** p < .001.

STATISTICALLY SIGNIFICANT DIFFERENCES BETWEEN NON-VISEGRAD AND VISEGRAD GROUP IN EDUCATION AND BMI



Non-Visegrad Countries VS Visegrad Group

This study highlights the relationship between post COVID-19 condition and health inequality associated with obesity and education attained at earlier life.

Protective factors against post COVID-19 condition

- Healthy weight
- COVID-19 vaccination
- Higher education attainment

Health inequality in the Visegrad group with higher obesity prevalence and a smaller proportion of high education attainment.

Raising awareness about the risks of obesity and providing assistance in maintaining a healthy weight in older people are needed.

Thank you

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