

# The Scarring Effect of Youth Unemployment: Does a Recession Make a Difference?

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## Background

Youth unemployment is associated with worse mental health later in life (so called “scarring effect”). Little research has looked at whether scarring effects differ in size across working life or whether they are modified by economic conditions at the time of entering the labour market. Yet such information is important for understanding how scarring effects operate, for identifying vulnerable groups and for locating points at which interventions could be made.

## Aims

We use national representative survey data to examine whether:

1. Youth unemployment experiences are associated with worse mental health across working-life
2. Whether the association differs by the age at which mental health is measured.
3. Whether the association differs by the unemployment rate faced after leaving full-time education.

## Methods

**Data:** Harmonised data from the British Household Panel Survey (BHPS) and its successor, the United Kingdom Household Longitudinal Study (UKHLS), two nationally representative yearly surveys of households from across the UK (1991-2018, 26 Waves).<sup>1</sup>

**Sample:** UK-born individuals aged 18-60 who have left full-time education for at least three years (n = 24,108; obs = 174,190; **Figure 1**)

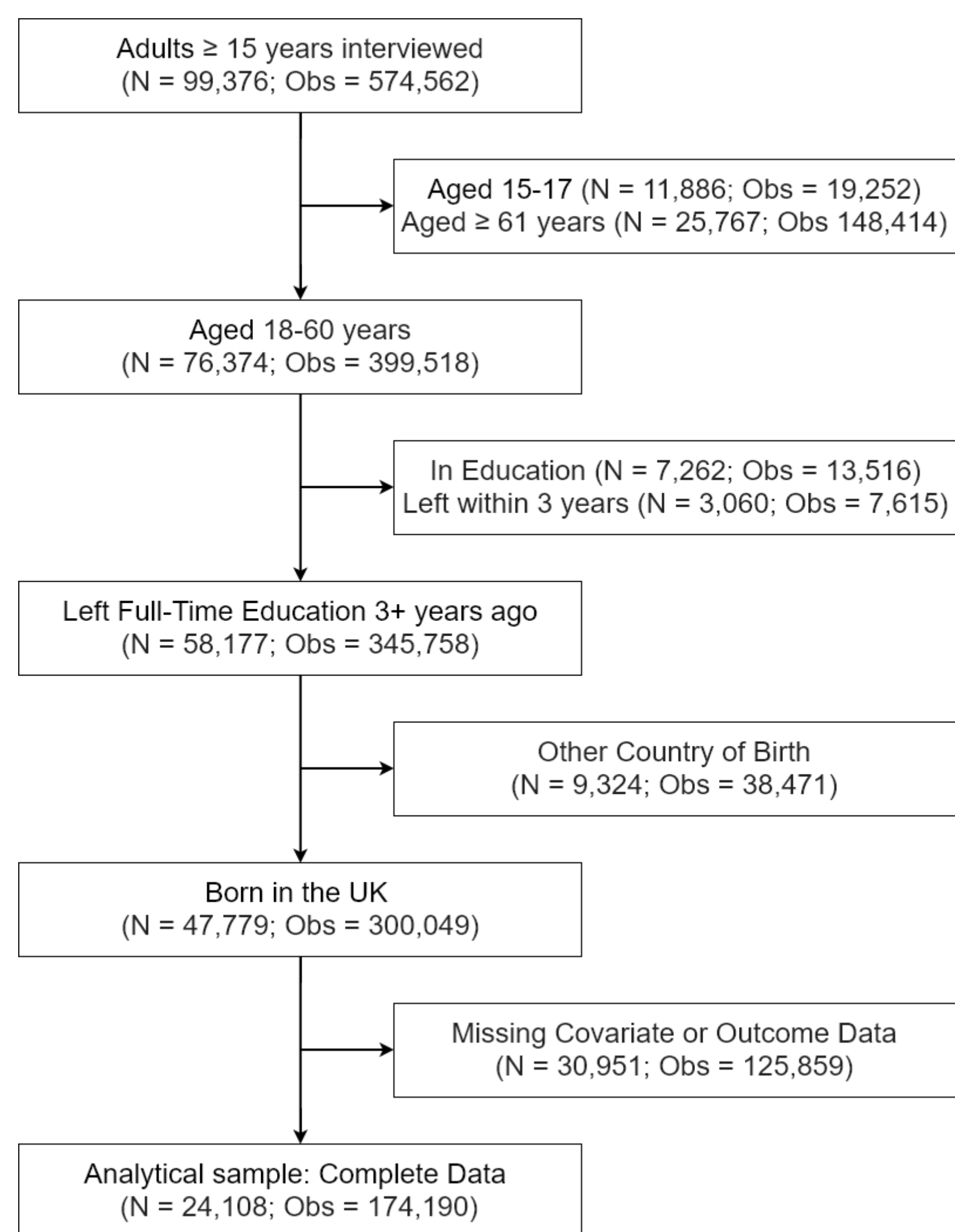
### Definitions:

- *Mental Health:* General Health Questionnaire (GHQ) 12-Item Likert score  
• Higher scores indicates worse mental health.
- *Youth Unemployment:* 6+ cumulative months unemployment in first three years after leaving full-time education. (Assessed retrospectively.)
- *Unemployment Rate:* Average monthly UK unemployment rate across three years after participant left full-time education.

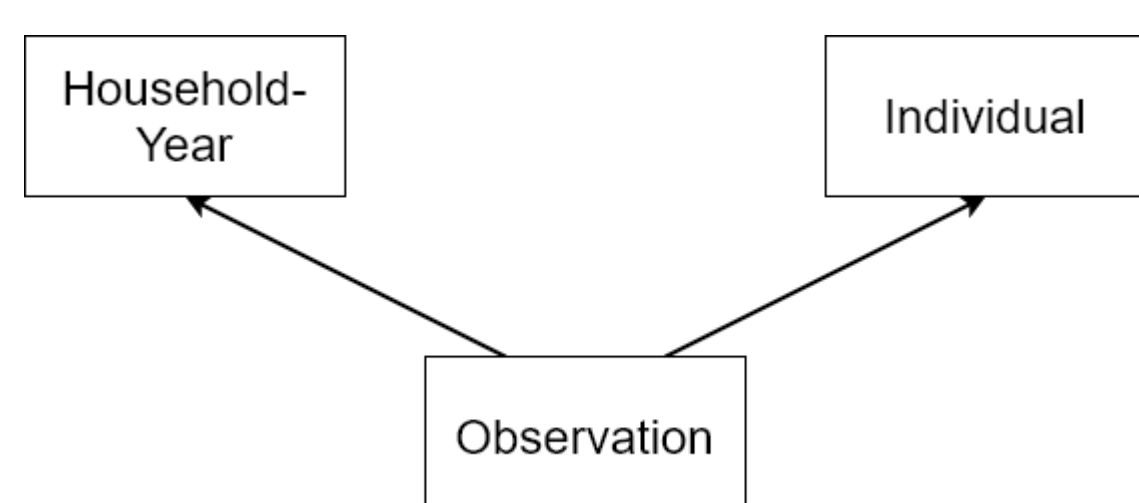
### Statistical Analysis:

- Multi-level random intercept model based on Bell (2014).<sup>2</sup>
- Age modelled as cubic polynomial. Birth year as quadratic polynomial.
- Main effects and two- and three-way interaction terms between youth unemployment, unemployment rate and age (linear term).
- Random intercepts for individuals and household-years (cross-classified structure; **Figure 2**)
- Controls for education level, ethnicity, sex, and father’s employment status at age 14.
- Complete case analysis.

**Figure 1:** Study population and exclusion criteria



**Figure 2:** Model multi-level structure



## References

<sup>1</sup> Institute for Social and Economic Research. (2018). *Understanding Society: Waves 1-8, 2009-2017 and Harmonised BHPS: Waves 1-18, 1991-2009*.

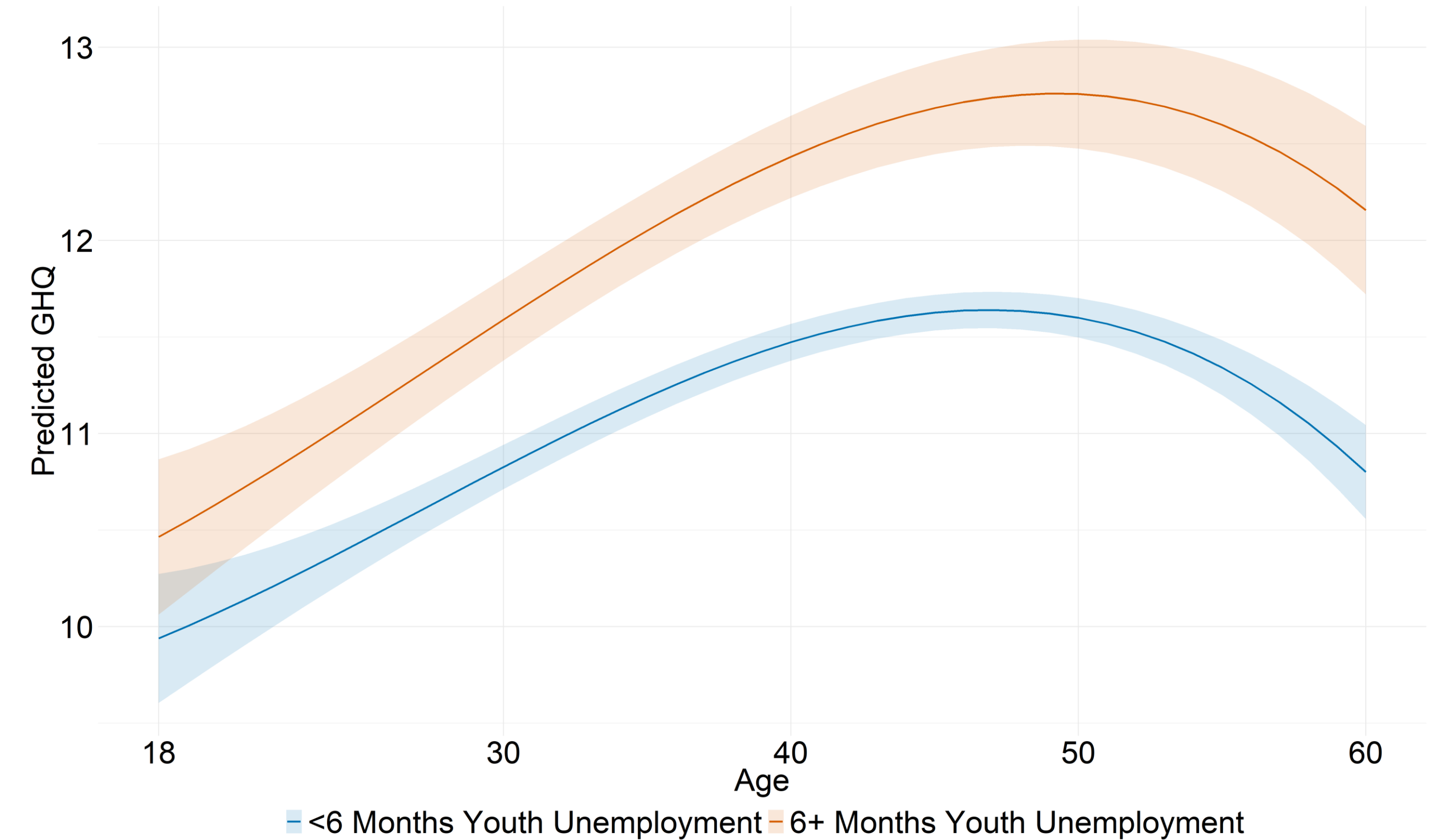
<https://doi.org/10.5255/UKDA-SN-6614-12>

<sup>2</sup> Bell, A. (2014). Life-course and cohort trajectories of mental health in the UK, 1991-2008 - A multilevel age-period-cohort analysis. *Social Science and Medicine*, 120, 21–30.

<https://doi.org/10.1016/j.socscimed.2014.09.008>

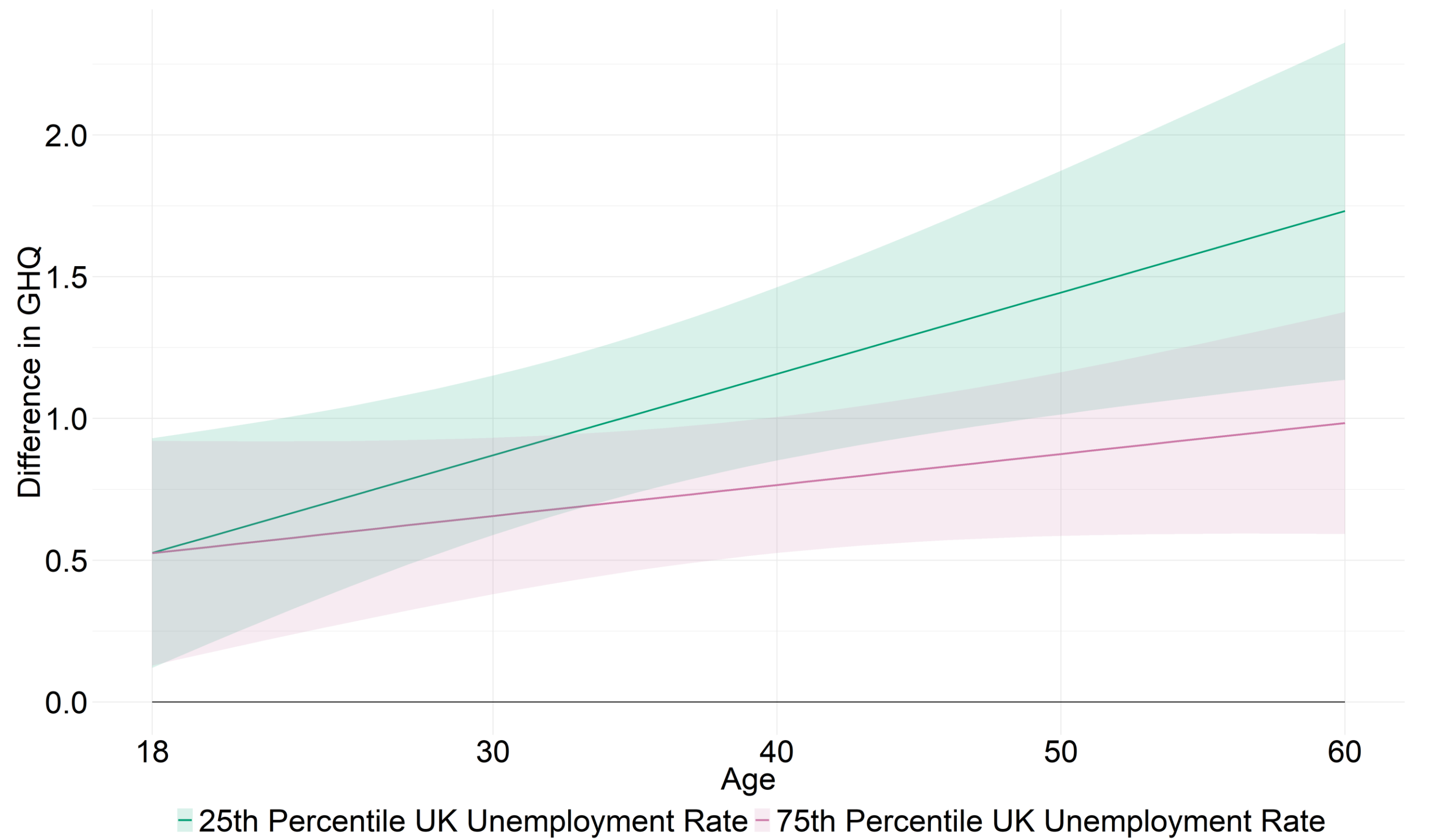
## Results

**Figure 3:** Predicted GHQ Scores by Youth Unemployment Experience (with 95% CIs)



Participants who experienced six months or more youth unemployment had worse mental health than their peers across working life (**Figure 3**). The differences between the two groups grew larger as the individuals aged ( $p<0.01$ ). The scarring effect is particularly pronounced, in later ages, among individuals who left education when the unemployment rate was low (**Figure 4**).

**Figure 4:** Marginal Effect of 6+ Months Youth Unemployment by Age and UK-Wide Unemployment Rate (with 95% CIs)



Selection *into* unemployment may depend on the unemployment rate, which could explain the relationships observed here. Results are substantively similar when we also control for GHQ scores measured in the year before participants left full-time education (see **Replication Files**). This suggests health-related selection in particular does not explain observed associations.

## Discussion

- Scarring effects of youth unemployment appear to grow across working life and are larger among individuals who become unemployed in a tight labour market.
- Interventions which focus on unemployed young people could have long-term impacts on mental health and may reduce health inequalities across the life course. Cost-benefit analyses of these interventions should take potential long-term benefits into account.
- Research should move from assessing overall associations to exploring underlying processes. A fruitful avenue for future research could be to explore whether scarring effects increase with age across countries, contexts and times.

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