Resilience, Recovery, and Deterioration: Heterogeneous Mental Health Trajectories Before and After Stroke

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BACKGROUND

Stroke is a leading cause of death and disability worldwide, but survival does not equal recovery. Depression and anxiety are common after stroke yet are frequently missed and left untreated.

Crucially, prior trajectory studies begin at stroke onset, so they cannot see whether distress was already present beforehand. This study follows the same individuals from before to after stroke to fill that gap.

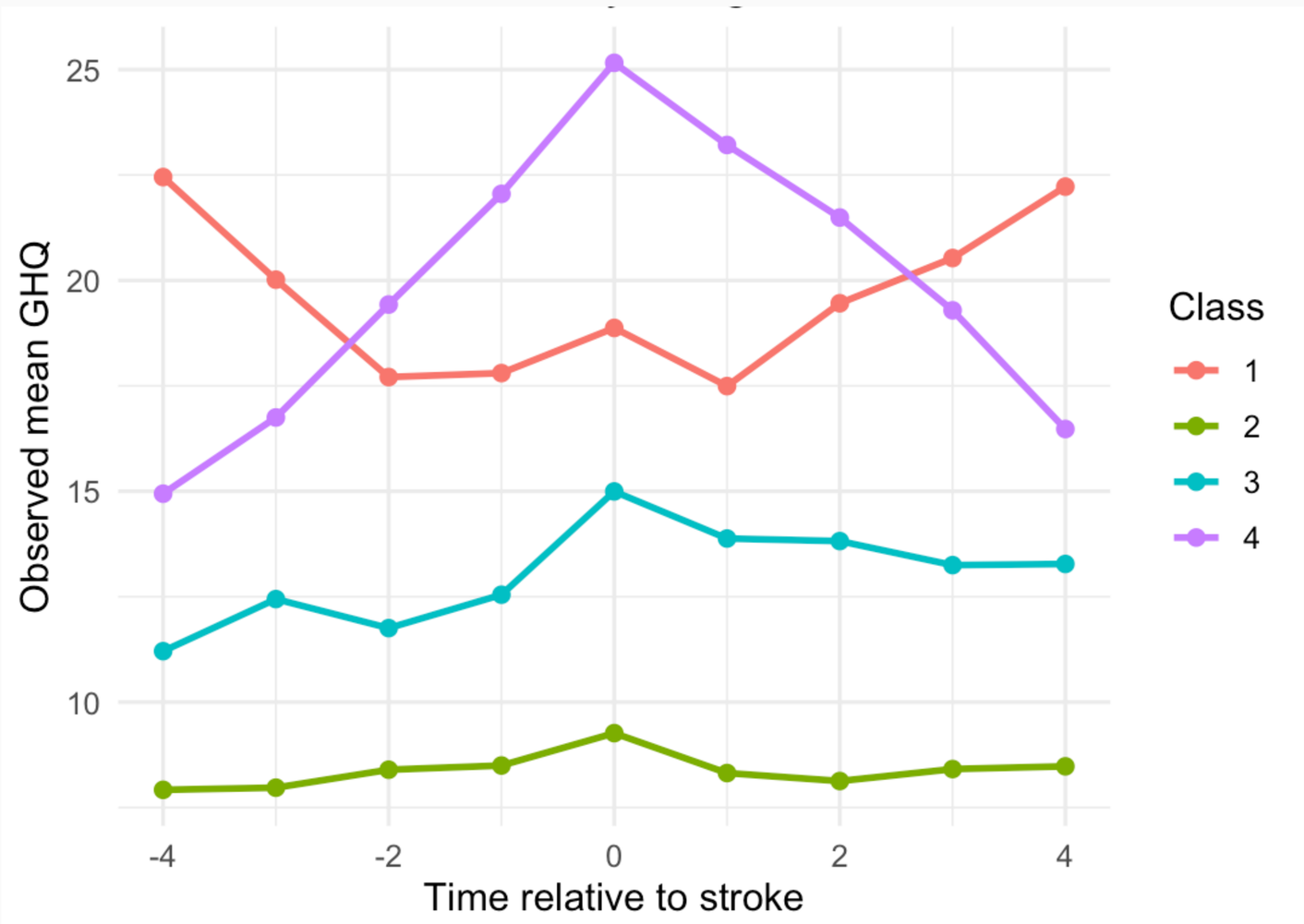
AIMS

- Characterise psychological distress trajectories across the full peri-stroke period.
- Explore whether stroke represents a meaningful point of change within those trajectories.
- Identify pre-stroke and clinical predictors of trajectory-class membership.

METHODS

- DATA – UK Household Longitudinal Study, a nationally representative panel cohort
- SAMPLE – N = 755 incident stroke cases
- MEASURE – GHQ-12 distress, aligned -4 to +4 waves around incident stroke
- MODEL – Growth mixture modelling of latent trajectory classes
- PREDICTORS – Multinomial regression of class membership (3-step approach)

The solution was robust across sensitivity analyses and contained multiple imputation of missing covariates.



WHO IS AT RISK?

	DECREASING → WORSENING	BORDERLINE DISTRESS	INCREASING → IMPROVEMENT
Reduced social connection	✓	✓	✓
Younger age	✓	–	✓
Female sex	✓	✓	–
Lower education	✓	–	–
Higher vascular burden	✓	–	–
Longer hospital stay (severity proxy)	–	✓	✓

FINDINGS

- In elevated-distress classes, distress was frequently evident in pre-stroke waves rather than emerging at stroke onset.
- Two classes showed a change of direction at stroke: one reduced then worsened; one rose then improved.
- For some survivors, stroke is a genuine point of change; for others it is a continuation of a pre-existing course.

CLINICAL IMPLICATIONS

1 Screening Timing
Distress persists after stroke, and predates stroke for many, so earlier and frequent screening could be beneficial.

2 Stroke was Individual
Post-stroke mental health varied person to person. Many individuals showed resilience or deterioration, while some showed improvement following stroke.

3 Consider Connection
Reduced social connection was a risk marker for all distress groups, supporting identification, while also potentially representing an intervention target.

CONTACT

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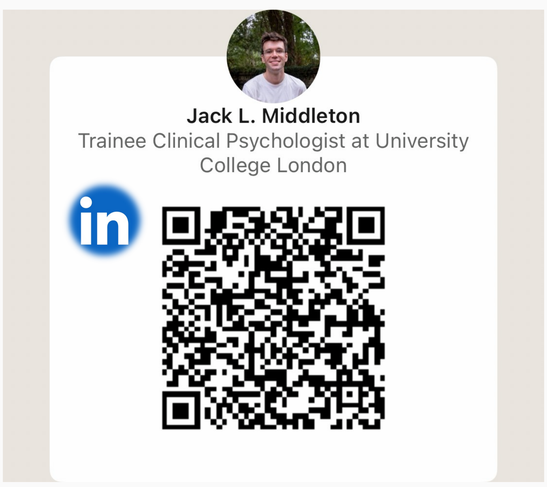

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