Resilience in older English people: Well-being and pain

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Ideas of resilience

- Resilience in childhood
- Resilience in older people: generalised resilience
- Resilience in older people: specific resilience

Resilience and vulnerability

- Emotion-laden notions - some clarity might help
- Two unobserved populations: resilients and vulnerables [normal ageing?]
- Respond to shocks [biological or relational] with recourse to resources
- Need to observe the resources
- Even after *all* resources are considered, responses to shocks differ in resilient group vs vulnerable group

Resilient and vulnerable groups: essentially unobserved

- How to tel the resilients from the vulnerables?
- No real/observable difference except in response to shocks.
- Two latent sub-populations (resilients & vulnerables) distinguishable only in their response.

Latent sub-populations or finite mixtures

$$g_\theta(y_i|\mathbf{x_i}) = \sum_{\kappa=1}^{K} \lambda_\kappa \phi(y_i|\mathbf{x_i'}\beta_\kappa, \sigma_\kappa^2) \qquad (1)$$

$$\theta = (\lambda, (\beta_1, \sigma_1^2), \dots (\beta_\kappa, \sigma_\kappa^2)) \qquad (2)$$

ELSA wave 3 with life history interview

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- Well-being: CASP-19 and CASP-17 (sensitivity analysis)

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- Covariates: sex, age, age^2, wealth, social class (manual), education (age leaving school), social support, social connection, household size, marital status, chronic conditions (COPD, cancer, angina . . .), smoking, drinking, physical exercise

Fit better with latent sub-populations?

Model	BIC	R^2
CASP-19	35694	0.24
CASP-19 + resilients & vulnerables	35609	0.36
CASP-17	34580	0.23
CASP-17 + resilients & vulnerables	34511	0.36

Pain and well-being (CASP-19 & CASP-17)

Sub-pop	Size %	Mean CASP	Pain	p
Resilients	84	41.9	-2.389	< 0.001
Vulnerables	16	38.5	-15.485	< 0.001
Resilients	83	36.9	-2.350	< 0.001
Vulnerables	17	34.0	-13.451	< 0.001

Well-being (CASP-19) and pain

Covariate	β	p
Female	0.718	0.0007
Married-cohabiting	1.835	0.0002
Separated-divorced	0.279	0.62
Widowed	1.345	0.013
Soc support	5.671	< 0.001
Soc connection	0.359	< 0.001
Pain-resilient	-2.389	< 0.001
Pain-vulnerable	-15.485	< 0.001
CVD	-1.193	< 0.001
COPD	-1.450	< 0.001
Cancer	-0.073	0.87
Smoker	-0.584	0.069
Alcohol daily	0.638	0.0041
Exercise vigorously	1.325	< 0.001
Exercise moderately	1.921	< 0.001

Included: constant, age, age^2, wealth, education, household size.