CLOSER Conference

Health 6: Health and employment

Chair: **Rebecca Hardy**

- Is any job better than no job? Re-employment, job quality, health and allostatic load biomarkers: Prospective evidence from the UK Household Longitudinal Study
  Tarani Chandola
- Health and Employment Inequalities amongst the Migrant Population in the UK: A Latent Growth Curve Analysis
  Elenora Iob
- Does the predictive power of the contested social mobility model on CVD risk extend to low income countries?
  Katie Hyde
- Income-related inequity in access to health care in China: evidence from a longitudinal household survey from 2000 to 2006
  Miaoqing Yang

closer

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Is any job better than no job? Re-employment, job quality, health and allostatic load biomarkers: Prospective evidence from the UK Household Longitudinal Study

Tarani Chandola and Nan Zhang

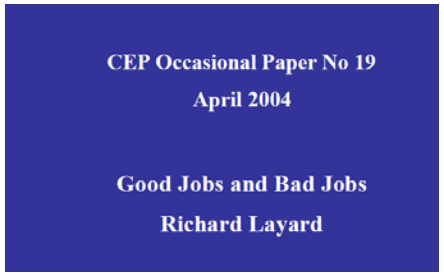
Cathie Marsh Institute for Social Research

University of Manchester

“Any job is better than no job”

So does a bad job bring more happiness than being unemployed? The evidence supports the answer Yes.[1] Moreover, when a person works there are also gains to the taxpayer (lower benefits and more taxes) and higher profits to employers.

The overall conclusion is that a move from an average job to a bad job would reduce happiness by less than the move from an average job to unemployment. It follows that a bad job feels better than unemployment.



Layard, Richard (2003) Has social science a clue? What would make a happier society?

Low wage jobs can act as springboards to better paid work

Low-Wage Jobs – Springboard to High-Paid Ones?

Andreas Knabe (Otto-von-Guericke University Magdeburg and CESifo)

Alexander Plum (Otto-von-Guericke University Magdeburg)[1]

Abstract We examine whether low-paid jobs have an effect on the probability that unemployed persons obtain better-paid jobs in the future (springboard effect). We make use of data from the German Socio-Economic Panel (SOEP) and apply a dynamic random-effects probit model. Our results suggest that low-wage jobs can act as springboards to better-paid work. The improvement of the chance to obtain a high-wage job by accepting low-paid work is particularly large for less-skilled persons and for individuals with longer periods of unemployment. Low-paid work is less beneficial if the job is associated with a low social status.

Being unemployed is the worst possible state to be in?

“The worst work status for health is unemployment” (Matthew Taylor 2017)

https://www.newstatesman.com/politics/staggers/2017/05/matthew-taylor-politicians-should-commit-making-all-work-good-work

“Research has shown that claimants on Universal credit are more likely to move into work than those on Job seeker’s allowance- meaning Universal credit is helping those people become better off”
- Damien Moore, conservative MP, House of Commons debate on Universal credit 18 Oct 2017

Re-employment and health

First comprehensive review of 53 longitudinal studies

There is strong evidence that re-employment:

- Improves physical & general health and well-being
- Improves mental health
- Magnitude of improvement comparable to the harmful effects of losing a job.

However:

- That depends on the quality and security of re-employment
- There is a persisting risk of poor employment patterns and further unemployment

But are bad jobs really good for poor people?

The working poor:

- People who work full-time and still cannot move out of poverty
- Most of these jobs provide little status and opportunities for social mobility
- Physically exhausting and repetitious
- Some may be regressing in their standard of living

Working Poor Families: Trends, Causes, Effects, and Suggested Policies
Author(s): Catherine S. Chilman
Reviewed work(s):
Source: *Family Relations*, Vol. 40, No. 2 (Apr., 1991), pp. 191-198
Published by: National Council on Family Relations
Stable URL: http://www.jstor.org/stable/585482

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Bad jobs and poor health

- We know a lot about how work stress affects health
- "Bad work, insecure, exploitative, controlling, is bad for health and wellbeing" *Taylor Review* launch, 11 July 2017

- But comparisons are between workers in good vs bad jobs
- What about comparing unemployed people with those in bad jobs?

Limitations of existing research

- Self-reported measures of health and well-being
- Lack of analysis of effects on physical vs mental health measures
- No analyses of biological measures associated with chronic stress
- Little analysis of the different dimensions of job quality

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Research Questions

Is return to work into poor quality work associated with an improvement in health and well-being, compared to remaining unemployed, in a cohort of British unemployed adults?

Or the reverse:

Is return to work into poor quality work associated with poorer health and well-being, particularly the bio-markers associated with stress?

Are bad jobs good or bad for poor people?

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Data

Understanding Society (UKHLS/USOC) waves 1 to 3

Wave 1: N=51,218

Wave 1: N= 2,113	(Aged between 30 and 75, previously employed, and looked for work in the last 4 weeks looking and are able to start work within the next 2 weeks)
Wave 2: N=1,081	(Those remaining in the sample at waves 2 with job quality measures)
Wave 2: N= 837	No missing self-report data
Wave 2: N= 343	No missing anthropometric data
Wave 2: N= 244	No missing blood biomarker data

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Dimensions low job quality

Dimensions			
Job itself	Skill	Work intensity	Autonomy and control
Job rewards	Pay and fringe benefits	Intrinsic job rewards	
Labour market	Job security: Having a job or not		

Quality of work – concept and measurement

Svenn-Åge Dahl

Torstein Nesheim

Karen M. Olsen

Sixth Framework Programme

Reconciling Work and Welfare in Europe

A Network of Excellence of the European Commission's Sixth Framework Programme

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Measures of low job quality in UKHLS

- Earnings quality ('low pay')
- Labour market security ('job insecurity')
- Quality of the working environment ('low job control', 'job dissatisfaction' and 'job anxiety')

Employment status by job quality (4 categories)

- Remained unemployed after 1 or 2 years
- Was re-employed in good quality work
- Was re-employed in work with at least one adverse job quality measure
- Was re-employed in work with two or more adverse job quality measures

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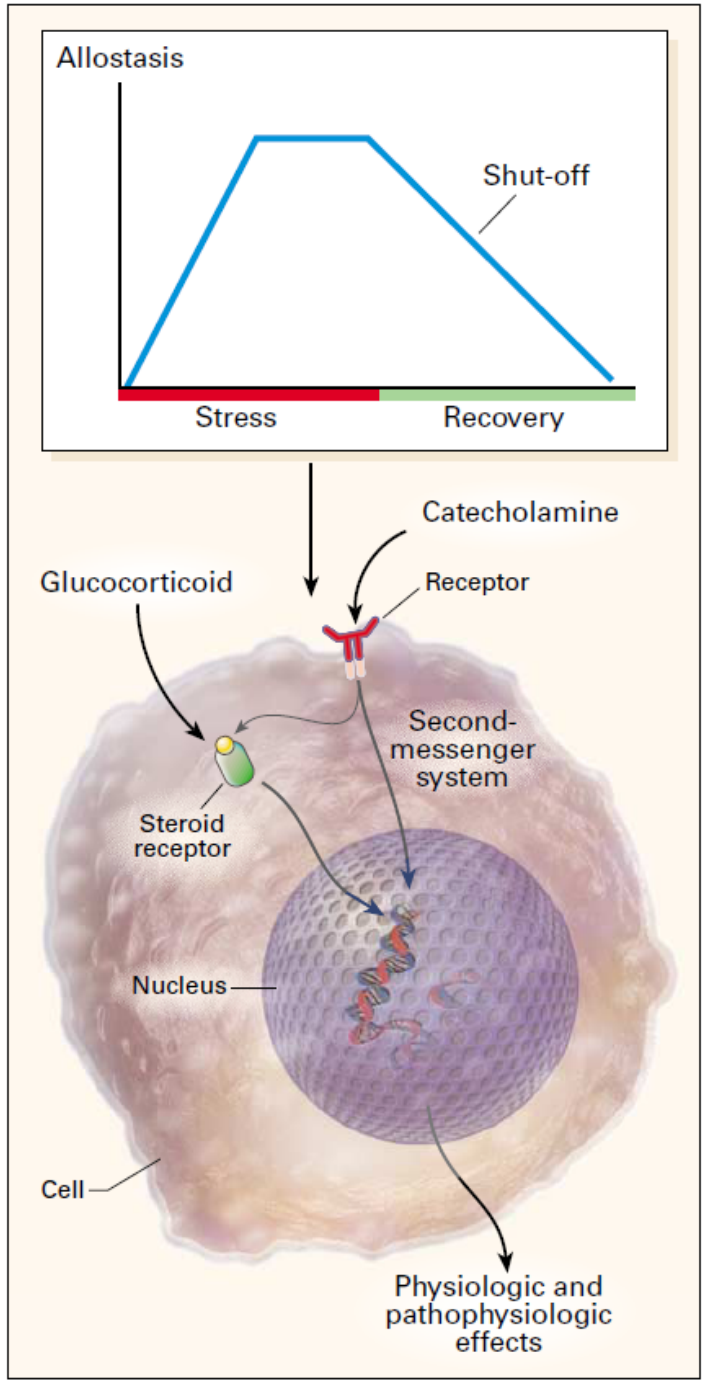
Allostasis in the autonomic nervous system and the HPA axis

PROTECTIVE AND DAMAGING EFFECTS OF STRESS MEDIATORS

BRUCE S. MCEWEN, PH.D.

The New England Journal of Medicine



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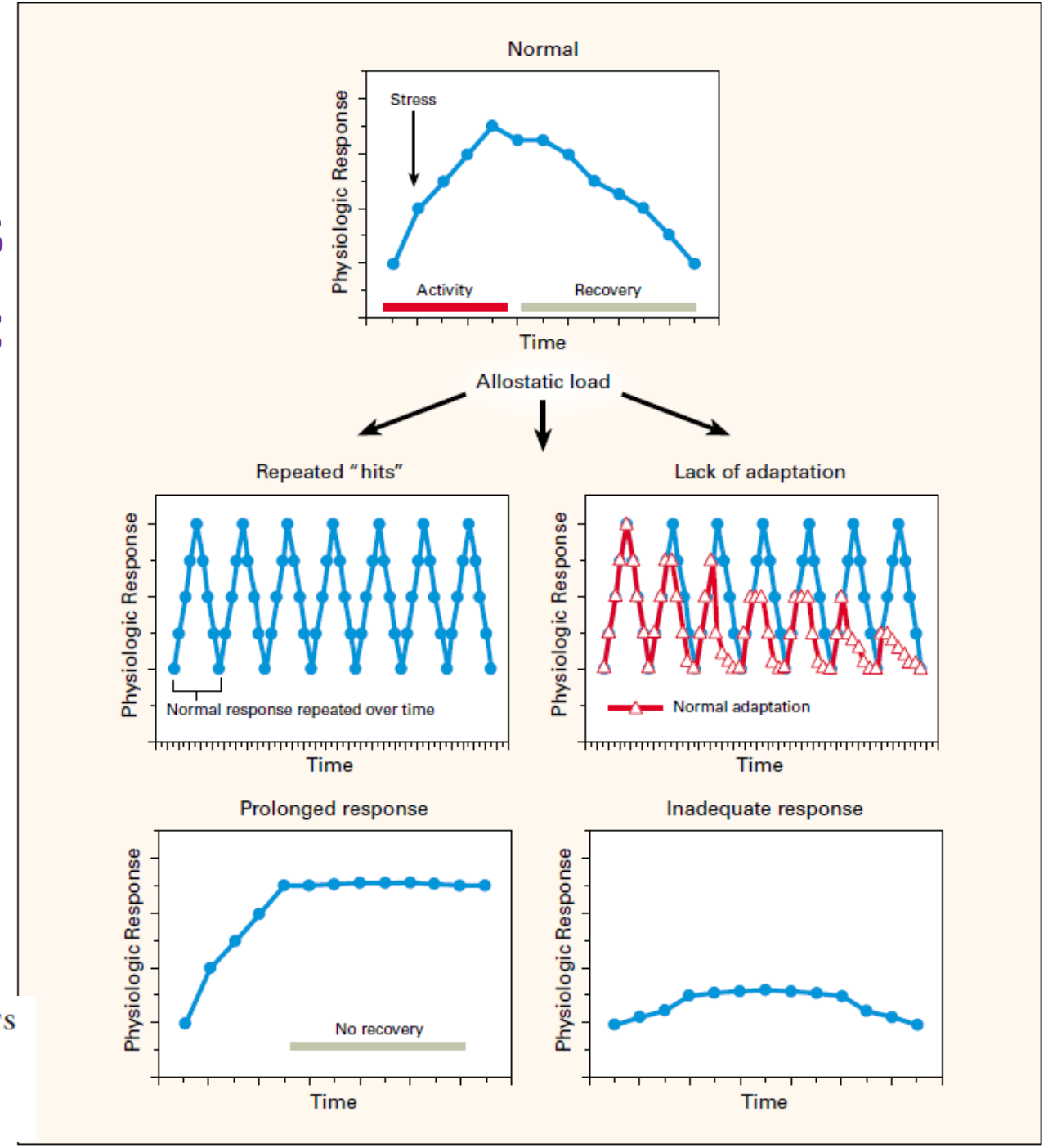
Three types of allostatic load

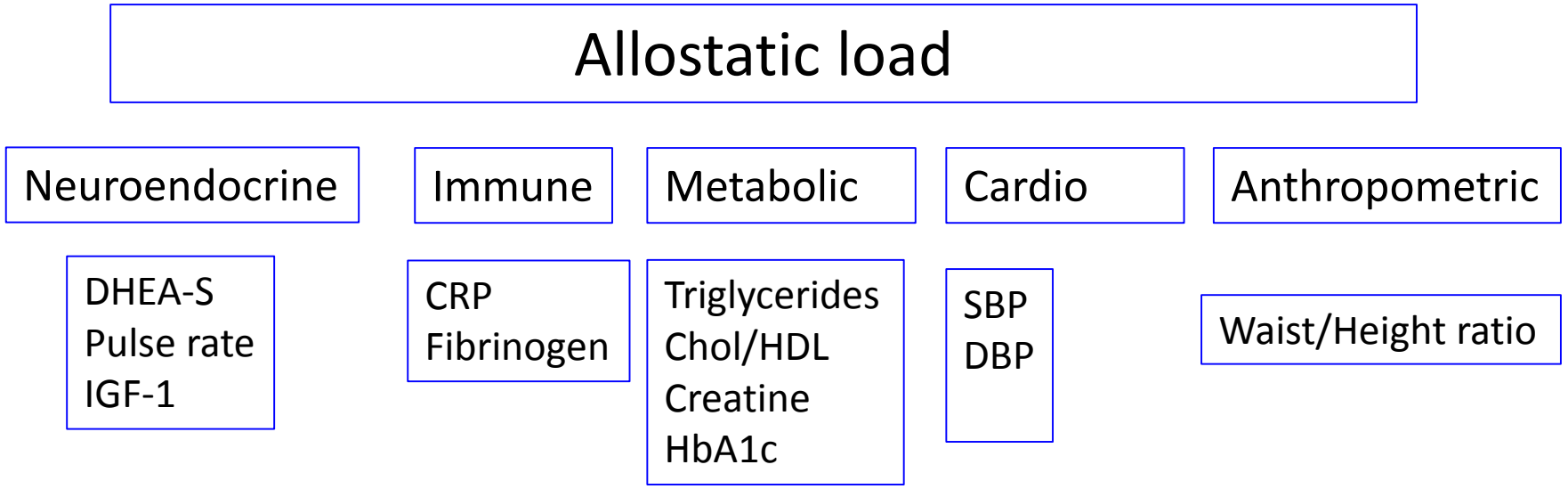


PROTECTIVE AND DAMAGING EFFECTS OF STRESS MEDIATORS

BRUCE S. MCEWEN, PH.D.

The New England Journal of Medicine

Allostatic load biomarkers in Understanding Society



Allostatic load was constructed by first dichotomizing each of the **11 biomarkers** based on respondents in the **highest sex-specific quartile of risk** (‘1’) versus the remaining quartile (‘0’)

Except for DHEAS and creatine clearance rate for which the **lowest quartile** indicated higher risk

These binary measures were then summed to create the overall allostatic load score (ranging from 0 to 10)

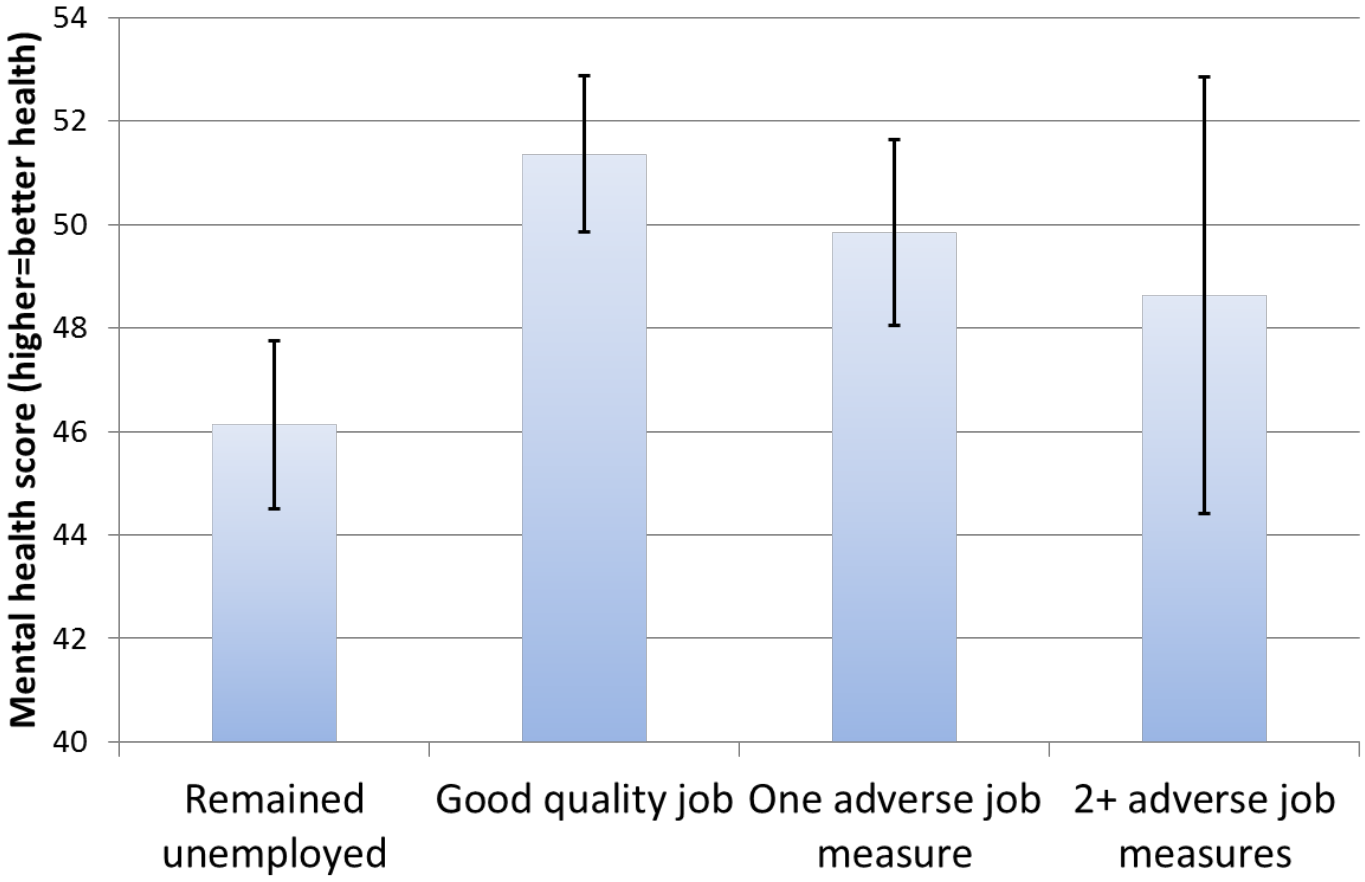
Models and covariates

Main Dependent variables:
- Allostatic load (count), Negative binomial regression models
- SF-12 (continuous) mental health score (MCS), physical health score (PCS), regression models

Main Independent variable: Employment status by job quality: 4 categories

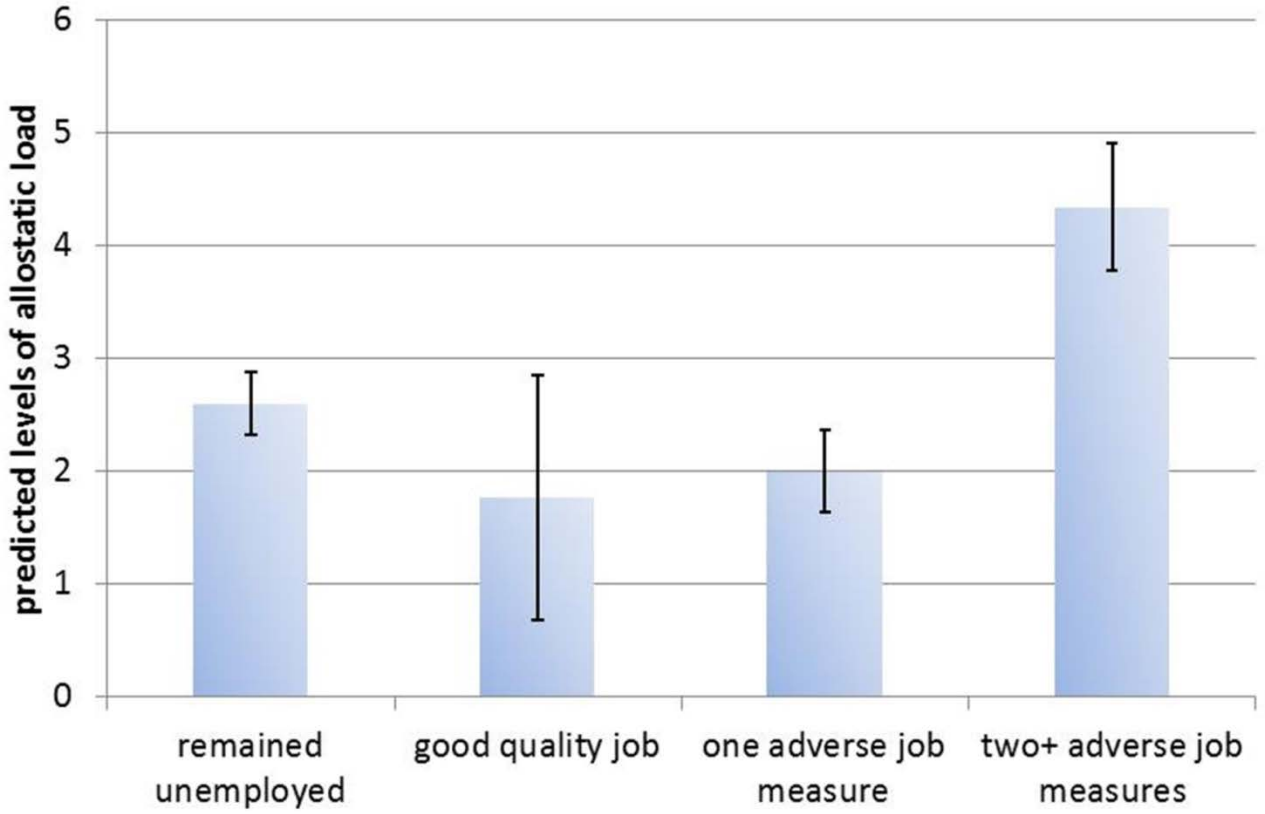
Covariates (measured at baseline):
Socio-demographic/economic factors- age, gender, highest qualification, housing tenure, marital status, household net income, race/ethnicity, number of children within household, number of people within household and year of last employment
Health- body mass index, cardiovascular disease/diabetes, physical and mental health, long-term illness or impairment, number of prescribed medicines taken

Job quality and estimated improvement in SF-12 mental health



- Formerly unemployed adults who were subsequently employed in good quality jobs improved their mental health scores
- There was little improvement for those re-employed in poor quality jobs

Job quality and estimated levels of allostatic load



Formerly unemployed adults who were subsequently employed in poor quality jobs had higher levels of allostatic load than those who remained unemployed

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Further results

Compared to those who remained unemployed, adults with…
- higher educational qualifications were more likely to get a good job.
- better physical health at baseline were more likely to get ANY job (whether good or bad).

Compared to those who remained unemployed, adults re-employed in poor quality work had higher levels of HbA1c, triglcerides, total cholesterol/HDL ratio, inflammation, lower kidney clearance rate.

Similar associations found for low pay, job anxiety, low job control and job dissatisfaction.

However, household income levels improved for all adults who were re-employed compared to those who remained unemployed.

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Conclusions

- Transition into poor quality or stressful work is associated with higher levels of bio-markers associated with chronic stress, despite overall improvement in household finances.

- The selection of the healthier unemployed adults into poor quality or stressful jobs is unlikely to explain their elevated levels of chronic stress related biomarkers.

- Job quality cannot be disregarded from the employment success of the unemployed.

- Regardless of whether bad jobs are a springboard to a better life, bad jobs are bad for health.

Acknowledgements

- Co-author Nan Zhang
- ESRC funding for International Centre for Lifecourse Studies in Society and Health, National Centre for Research Methods and UKHLS Biomarkers project

Re-employment, job quality, health and allostatic load biomarkers: prospective evidence from the UK Household Longitudinal Study

Tarani Chandola* and Nan Zhang

International Journal of Epidemiology, 2017, 1–11
doi: 10.1093/ije/dyx150

Migration to the UK: A longstanding History

- **Who are Migrants?**
- All those born outside the UK (Bridget & Blinder, 2015)
- ≠ Ethnic Minorities (Acevedo-Garcia et al., 2012)

- **Diversity and complexity of migration flows**
- Distinct cohorts from different regions (Schneider, 2016)
- 1993-2015: share of migrants doubled from 7 to 13% (Rienzo & Vargos-Silva 2014)
- 2016: net migration 84,000 lower than in 2015 (ONS, 2017)

- **Migration = intrinsic aspect of Britain's modern life** (Marmot, 2016)
- What are the consequences for Health?

Health Inequalities amongst Migrants in the UK

- **Evidence for poorer Health in migrants**

- Higher incidence of mental health problems and infectious diseases (Jayaweera, 2014)
- Higher morbidity and mortality from non-communicable diseases (ethnic minorities) (Nazroo, 2014)

- **The healthy immigrant effect (HIE)**

- Migrants are relatively healthier upon arrival, but their good health deteriorates more over time than would be expected due to normal ageing (Domnich et al., 2012)

BUT …

- Possible variations by country of birth, ethnicity, and migration histories
- Only some cross-sectional evidence for the UK (Kennedy et al., 2014)

What are the driving forces of Health Inequalities in Migrants?

- Genetic differences
- Culturally-based differences in lifestyles
- Poorer access to good quality healthcare
- Social exclusion and discrimination
- **Socio-economic position: Employment Inequalities**

(Nazroo, 2016)

How do Employment Inequalities contribute to migrants' health disparities?

- **Employment & Health**

- Employment is a key social determinant of health (Marmot, 2010)
- Lower class occupations, low-paid and temporary jobs are associated with poorer health outcomes (Chandola & Zhang, 2017; Davillas et al., 2017)

- **Employment Inequalities in Migrants**

- More likely to be employed in so-called three D jobs, i.e. "dirty, dangerous, demeaning" (Orrenius & Zavodny 2012)
- Constraints when looking for work, e.g. discrimination, poor transferability of skills from home country (Schneider, 2016)
- Considerably exposed to worsening of economic conditions after the 2008 economic crisis (Rienzo,2016)

Evidence Gaps

- Limited research investigating the intersection between Health and Employment Inequalities in Migrants
- Marked absence of longitudinal evidence for the HIE in the UK
- Focus on Ethnicity rather than Migration Status

Research Questions

1) How has the health status of migrants changed following the 2008 economic crisis compared to UK-born individuals?

2) Are there any differences in migrants' health trajectories according to length of stay in the UK and ethnicity?

3) Is the effect of unfavourable employment conditions more detrimental for the health of migrants than UK-born people?

Methodology

- **Sample**

- UK Household Longitudinal Study (UKHLS), waves 1- 6 (2009-2015) (Knies, 2015)
- Balanced panel design, excluded those who were not employed at wave 1
- Size: Migrant = 2,005; UK-born = 11,671

- **Variables**

Outcome: Self-reported physical health (PCS SF-12), higher scores = better health

Exposure Variables:

➢ Ethnicity and length of stay in the UK (migrants only)

➢ Employment conditions: Occupation (three-class version NS-SEC),Gross monthly pay (log-transformed), and type of Employment Contract (permanent vs temporary)

Covariates*:* Age, sex, marital status, education

Methodology

- **Analysis**

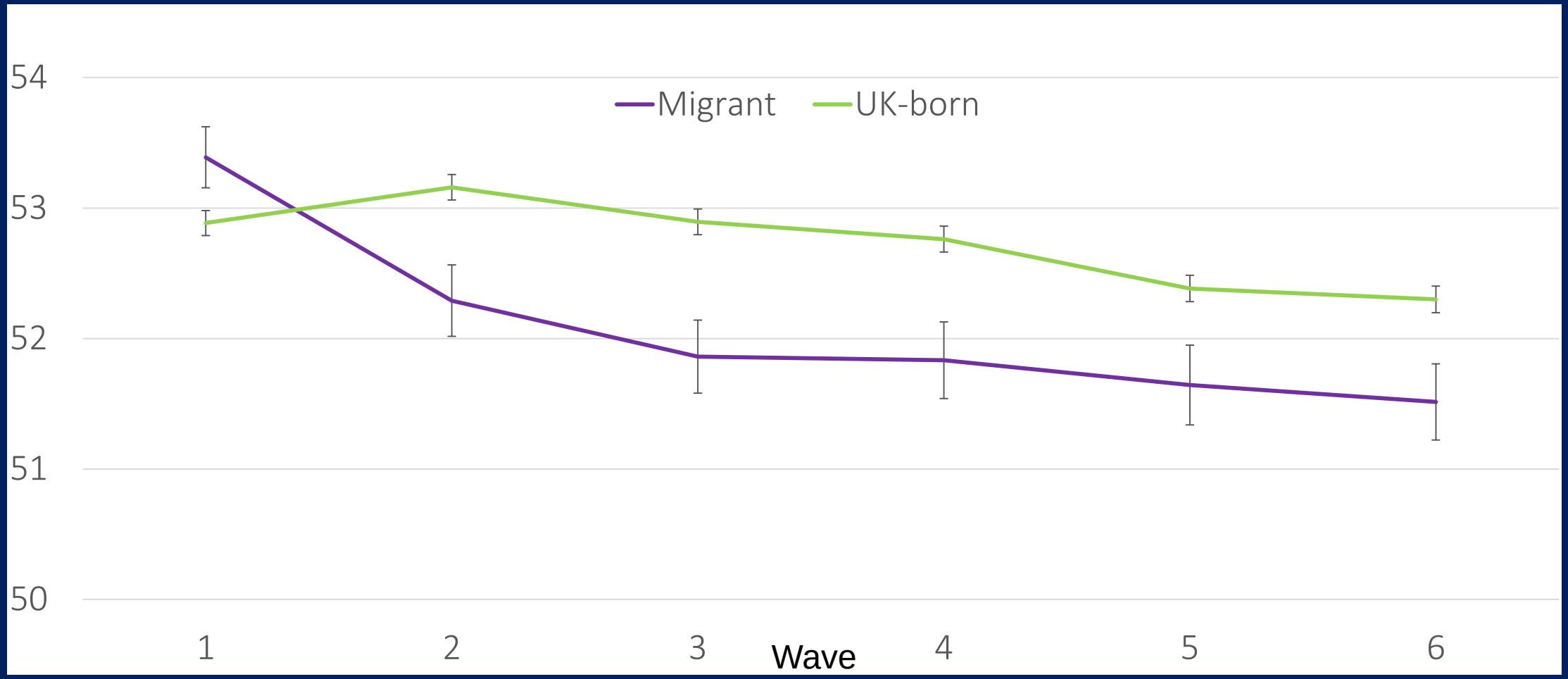
- Latent Growth Curve Modelling based on Structural Equation Modelling (Newsom, 2015)

- Multiple-group approach, 5 models:

1. Physical Health (PH) trajectories by migration status + age and sex
2. PH trajectories by length of stay + age and sex (migrants only)
3. PH trajectories by migration status and ethnicity + age and sex
4. Associations between employment and PH latent scores at each wave + covariates
5. Cross-level interactions between time and baseline employment on PH trajectories + covariates

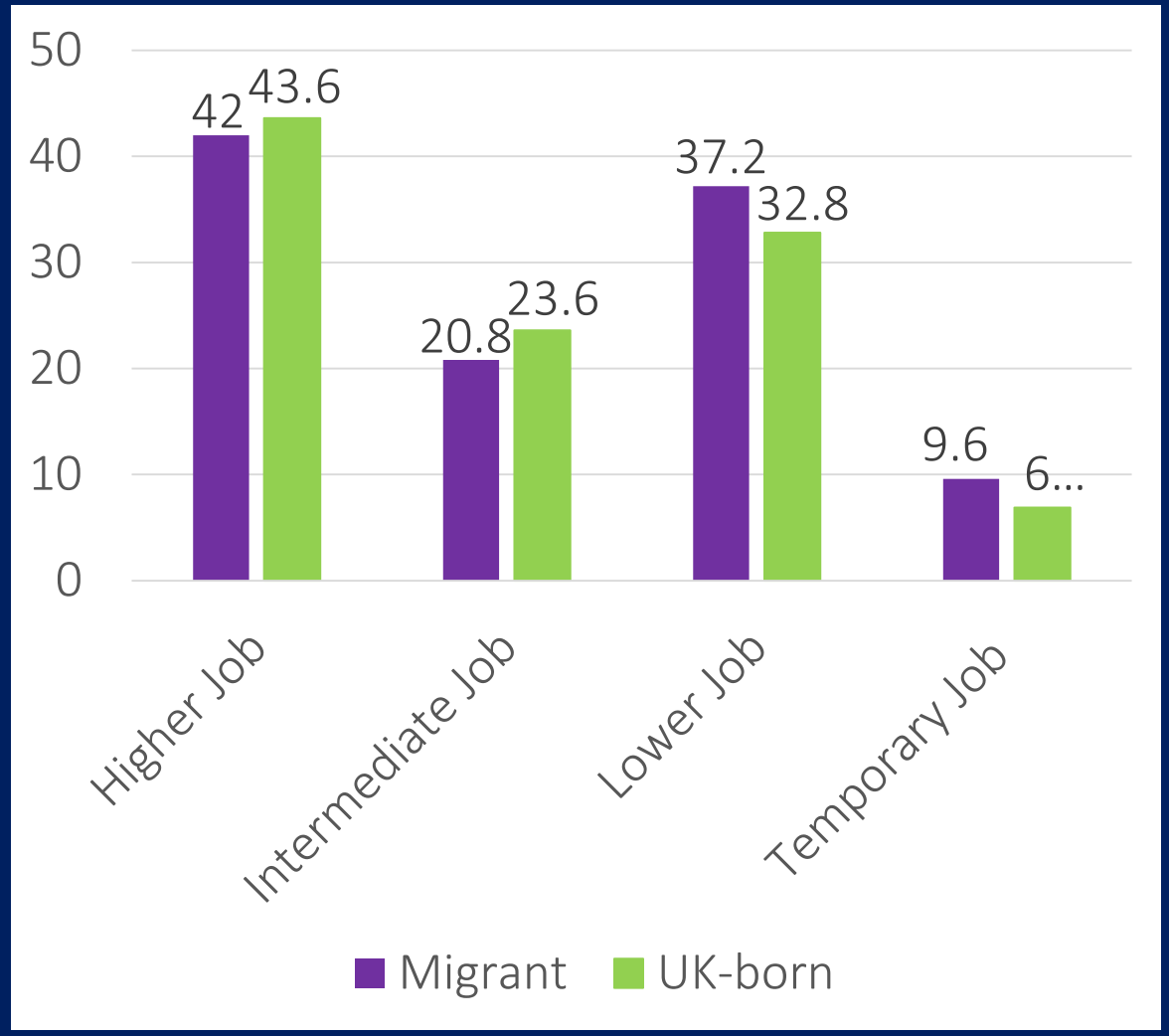
- Missing data: Multiple imputation by chained equations (MICE)
- Analyses weighted to account for complex survey design of the UKHLS

Observed Means of Physical Health by Migration Status (2009-2015)

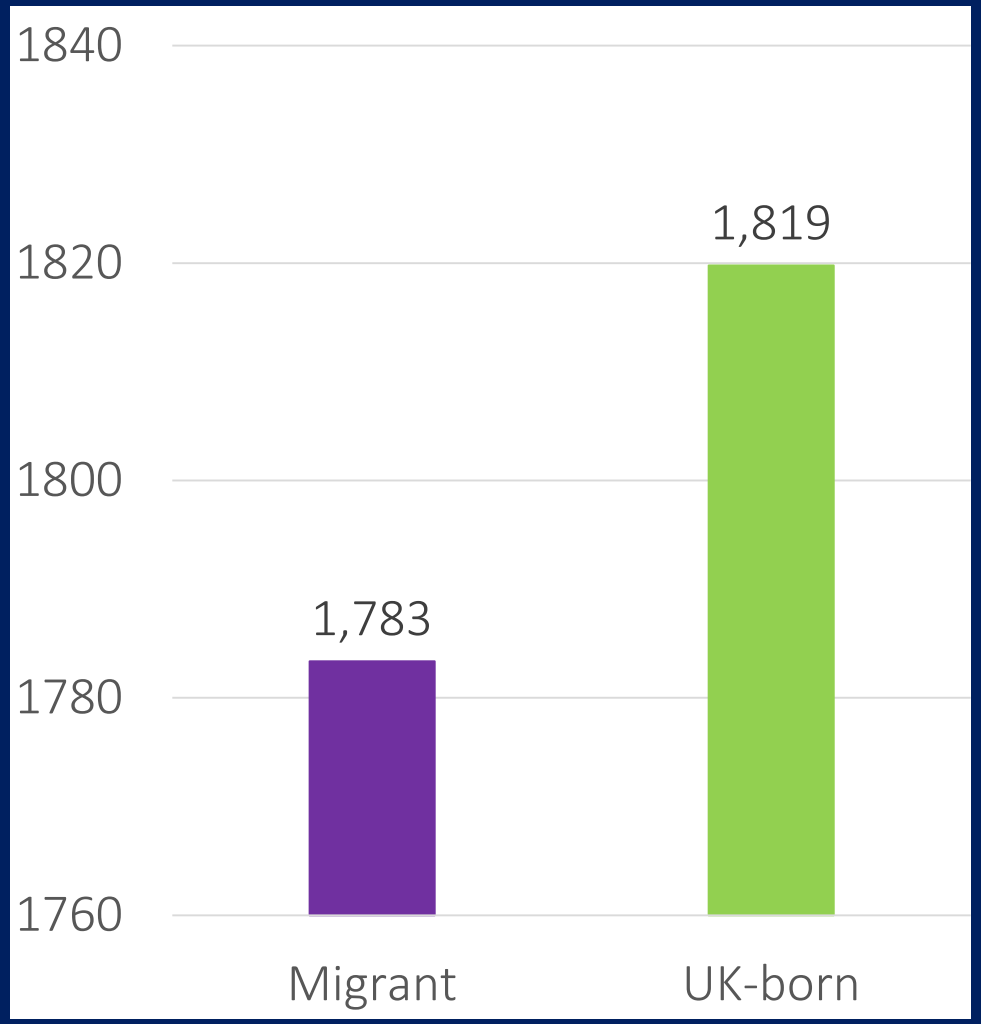


Source: UKHLS, waves 1-6

Observed Proportions of Occupation and Type of Employment Contract by Migration Status (wave 1)

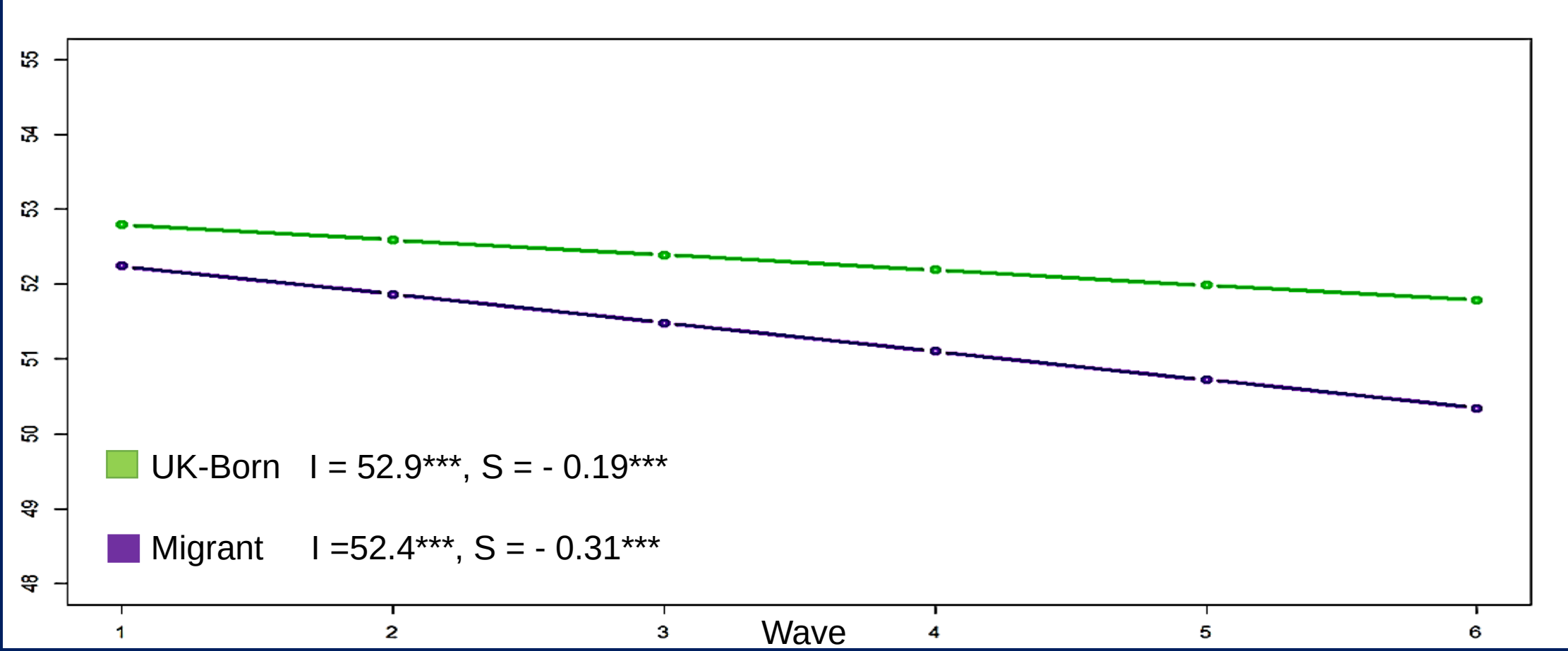


Observed Means of gross monthly pay (£) by Migration Status (wave 1)



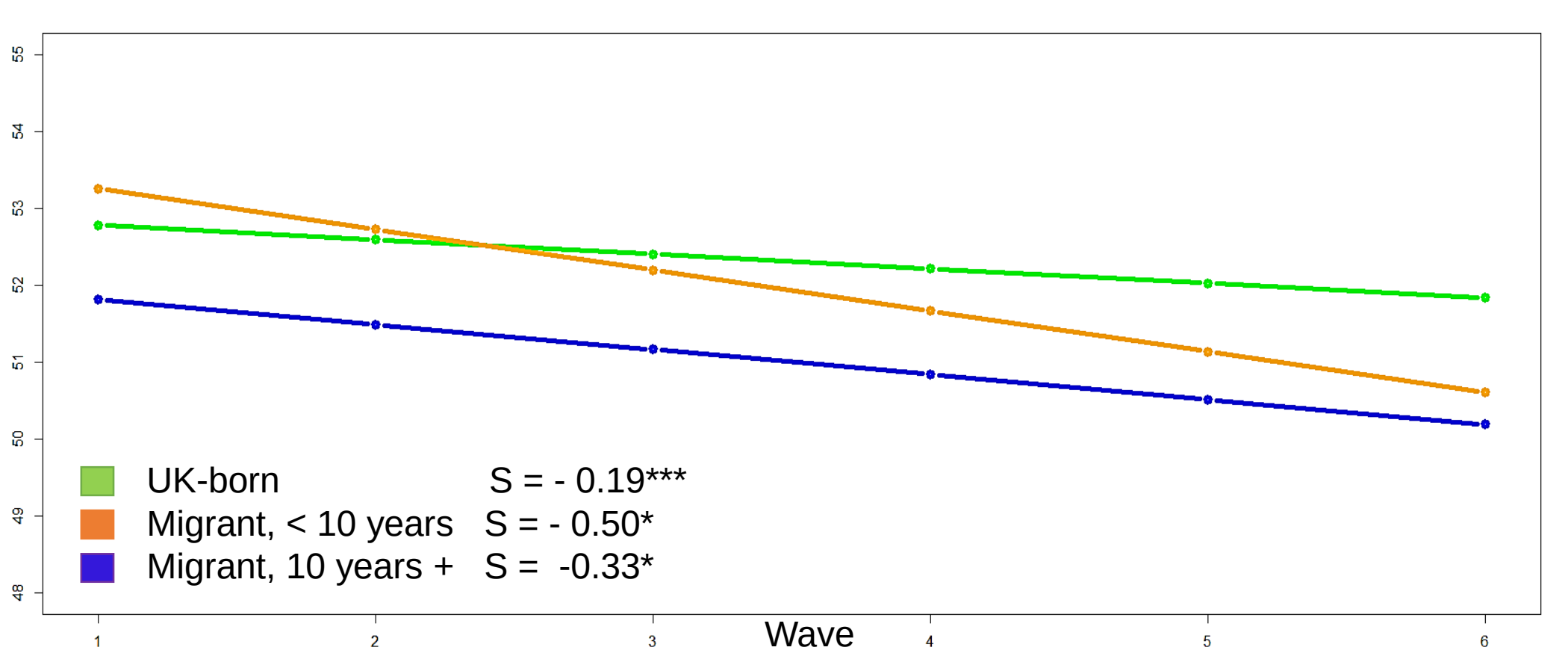
Source: UKHLS, wave 1

LGC Model 1:Estimated Change in Physical Health 2009-2015 by Migration Status



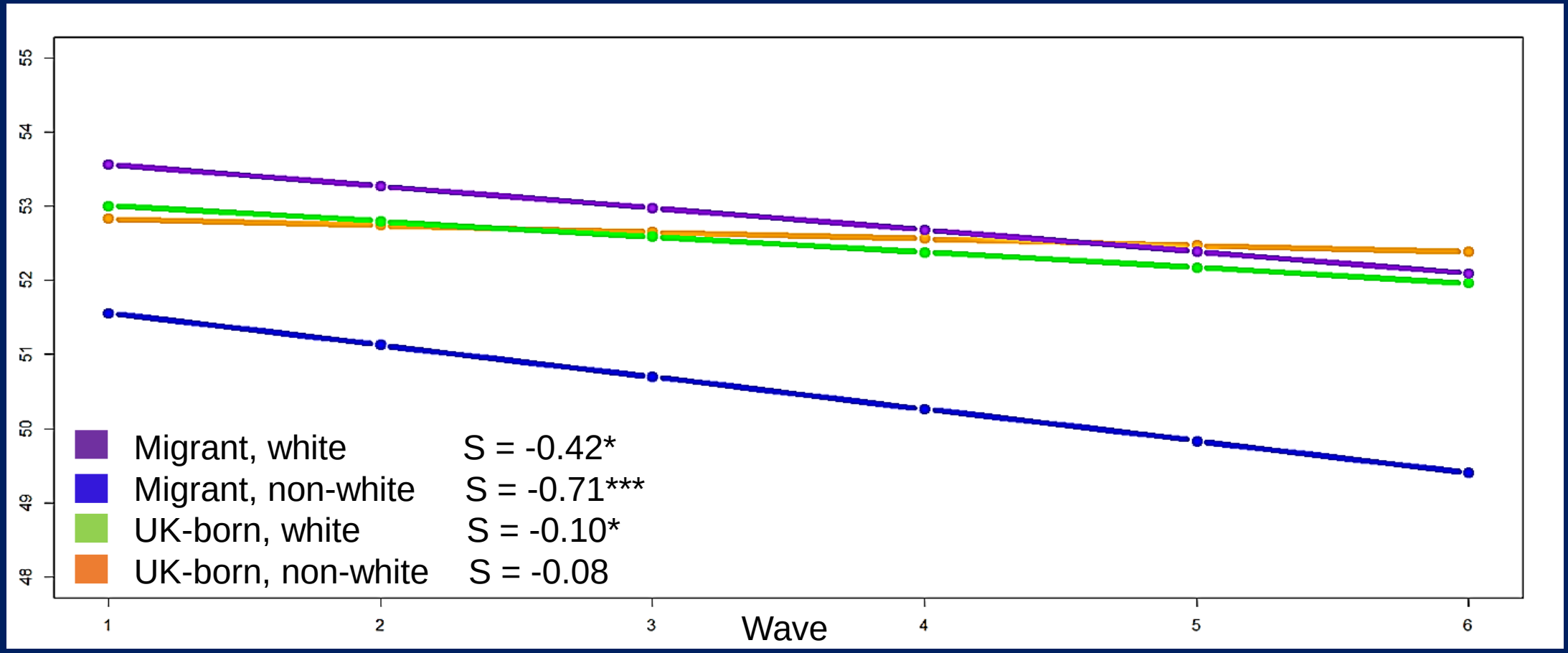
Source: UKHLS, waves 1-6.; adjusted for sex and age; I = intercept, S = slope; *** p < 0.001, ** p < 0.01,* p < 0.05

LGC Model 2: Estimated Change in Physical Health 2009-2015 by Migrant Status and Length of Stay in the UK



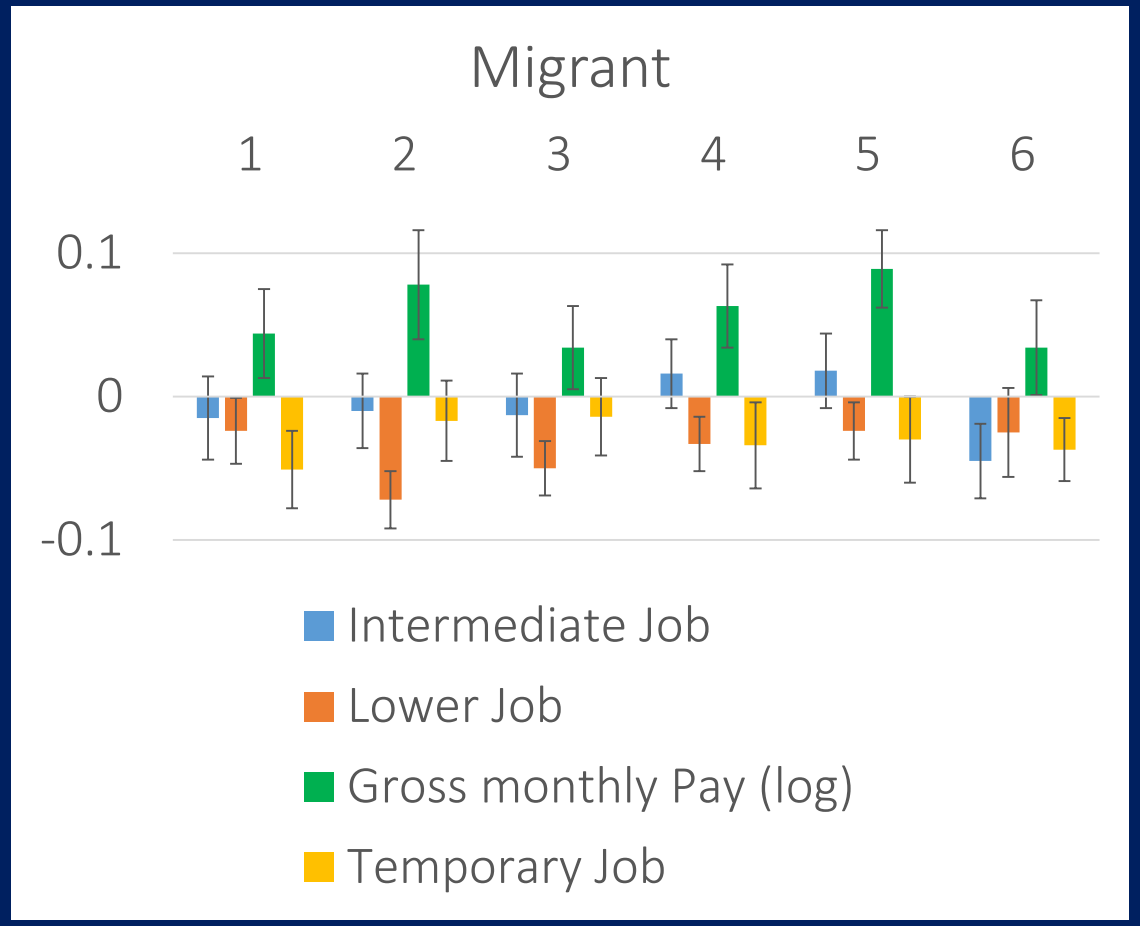
Source: UKHLS, waves 1-6; adjusted for sex and age; S = Slope; *** p < 0.001, ** p < 0.01,* p < 0.05.

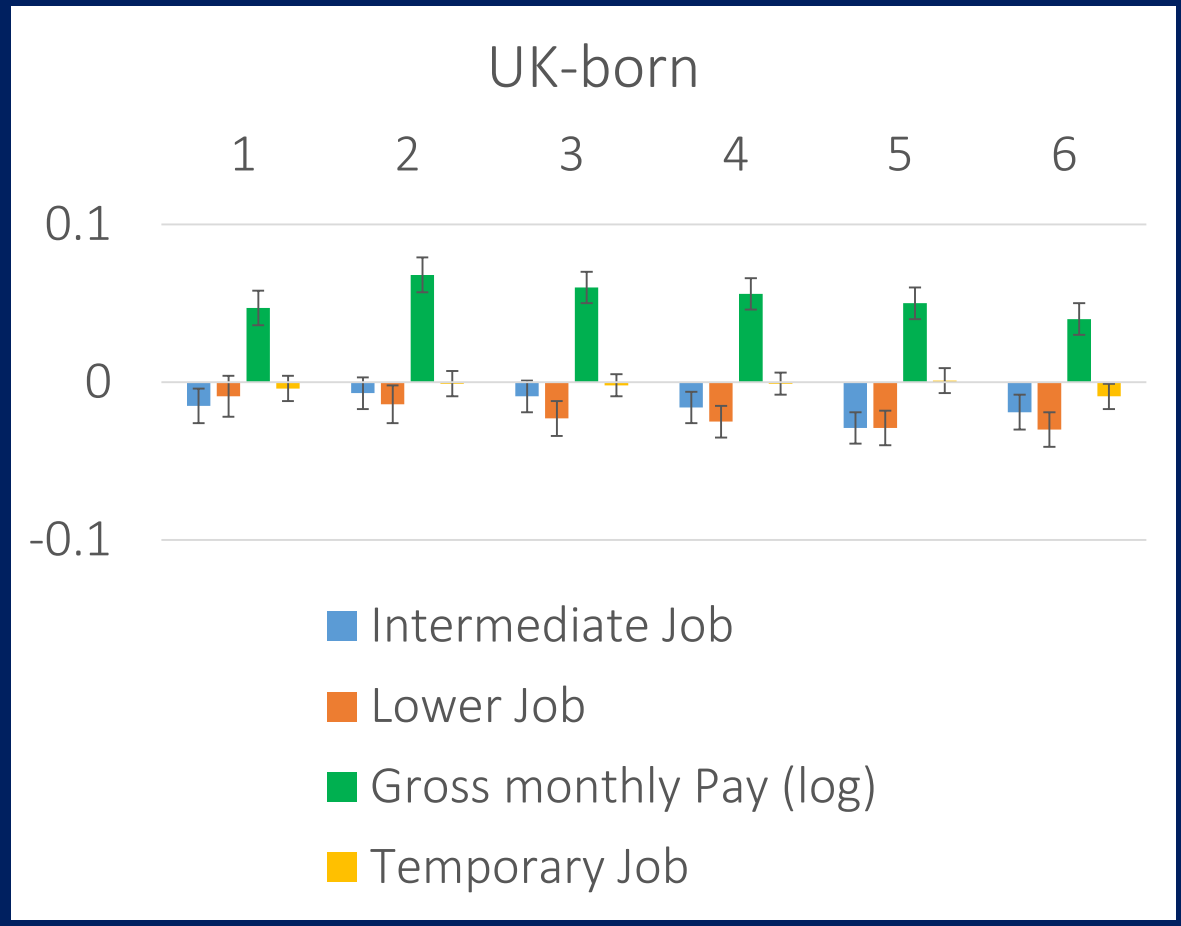
LGC Model 3: Estimated Change in Physical Health 2009-2015 by Migration Status and Ethnicity



Source: UKHLS, waves 1-6; adjusted for sex and age; S = Slope; *** p < 0.001, ** p < 0.01,* p < 0.05

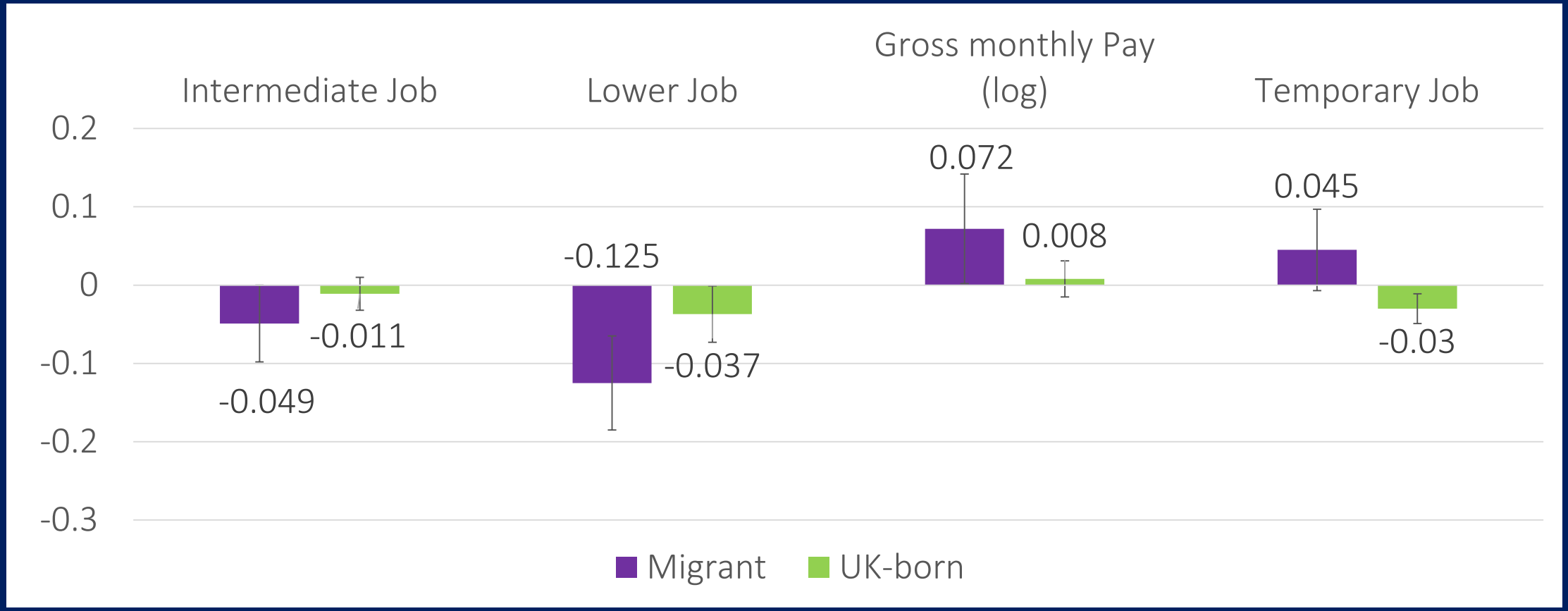
LGC Model 4: Associations between Physical Health and Employment at each wave





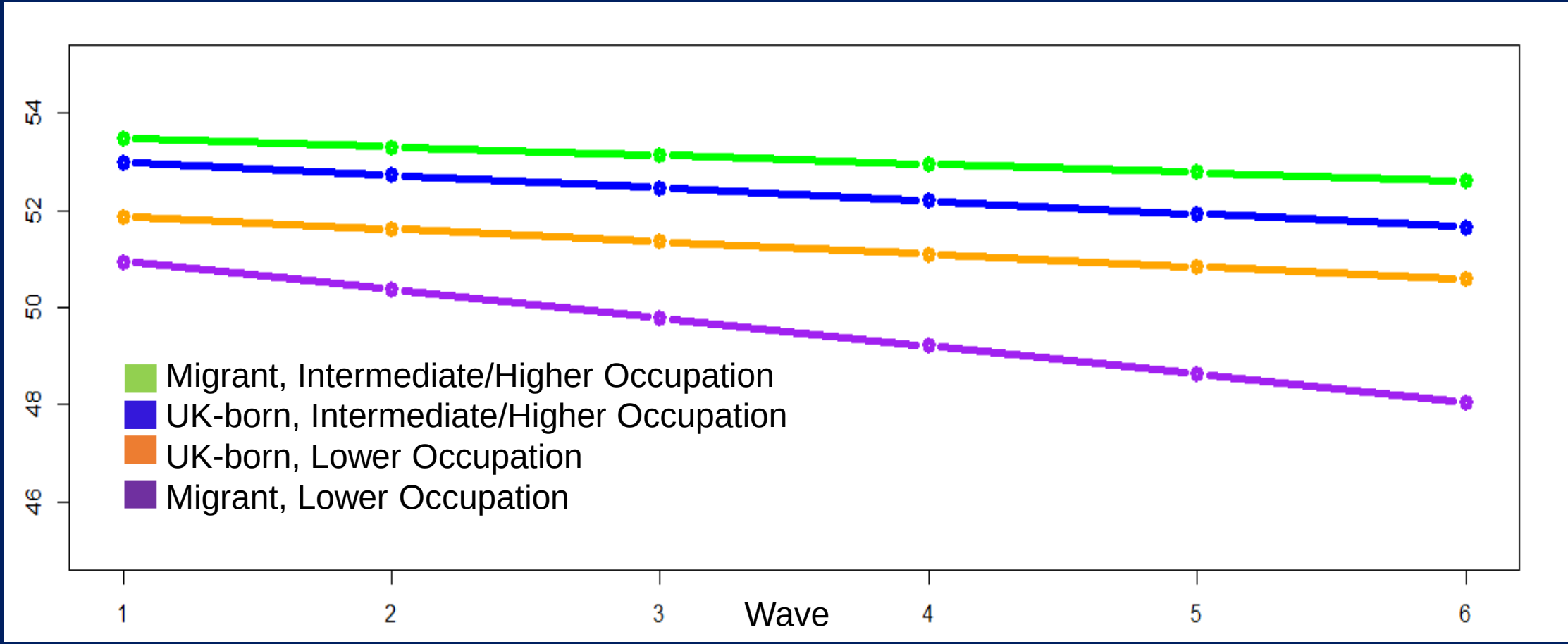
Source: UKHLS, waves 1-6; standardised regression coefficients; adjusted for all covariates

LGC Model 5: Cross-level interaction effects between Time and baseline Employment on Physical Health



Source: UKHLS, waves 1-6; standardised regression coefficients; adjusted for all covariates

LGC Model 5: Estimated change in Physical Health by Migration Status and baseline Occupation (lower vs intermediate/higher)



Source: UKHLS, waves 1-6; adjusted for all covariates

Discussion

- **Summary of Findings**

➢Steeper decline in self-reported physical health in migrants compared to UK-born respondents

➢Significant differences by length of stay in the UK and ethnicity:

- Results consistent with the Healthy Immigrant Effect
- Effect of ethnicity on health is larger in the group of migrants than UK-born

➢Significant associations between poorer employment conditions and worse physical health in both groups

➢However, larger effect sizes and cross-level interaction between time and occupation in migrants

Discussion

- **Conclusions:**

- Longitudinal evidence for health inequalities in the UK migrant population, which might be explained by their more disadvantaged employment conditions

- **Policy implications:**

- To address health inequalities by promoting equal employment opportunities/conditions for everyone, including migrants

- **Limitations:**

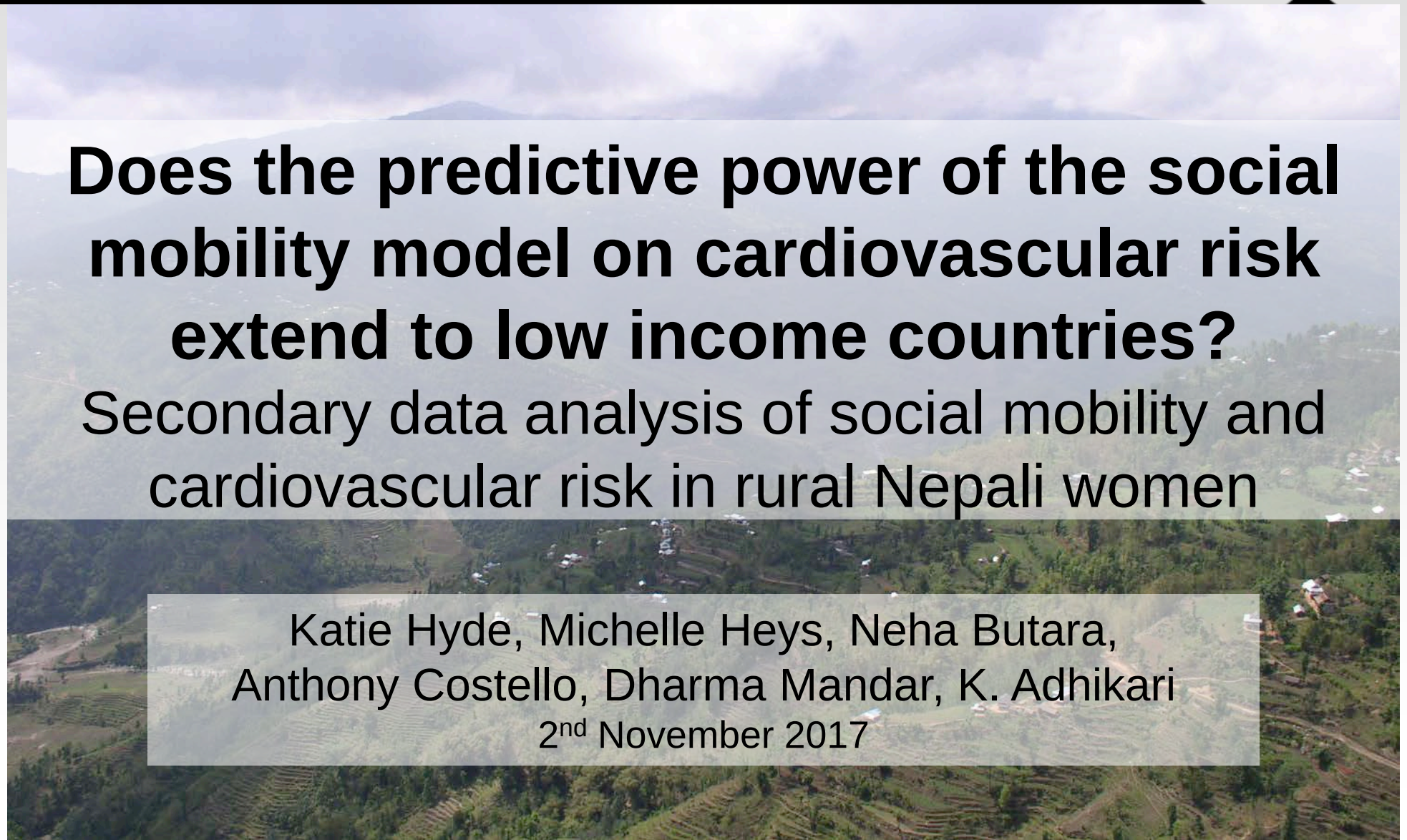
- Attrition and non-response; self-reported measure of health; under-representation of newly arrived migrants and refugees

- **Next steps:**

- Objective indicators of health; biological pathways leading from employment to health inequalities; impact of Brexit on migrants' health and employment outcomes

Thank you for your attention!

Any Questions?



Does the predictive power of the social mobility model on cardiovascular risk extend to low income countries?

Secondary data analysis of social mobility and cardiovascular risk in rural Nepali women

Katie Hyde, Michelle Heys, Neha Butara,
Anthony Costello, Dharma Mandar, K. Adhikari

2nd November 2017

Introduction

Public Health Relevance

- CVDs are No. 1 cause of death globally[1]
- Nepal's hypertension levels are reportedly higher than global and regional averages[1,2]

Setting: The Makwanpur District of Nepal

- Low Income Country, with a GDP of $20.88bn[3]
- 82% rural communities where women's low status exacerbates health challenges[4, 5]
- Makwanpur District: mainly rural and agricultural[5]

[1]WHO, 2016; [2] Neupane *et al*., 2014; [3] World Bank Data, 2016; [4] Suwal 2012;
[5]Central Bureau of Statistics, 2013

Setting


Mother and Infant Research Activities
CDO Regn. No. 366/050/51 | SWC Regn. No. 17313

CVD Risk and Social Mobility

Direction: Health Selection or Social Causation?[1,2,3]

Supporting and Dissenting Evidence

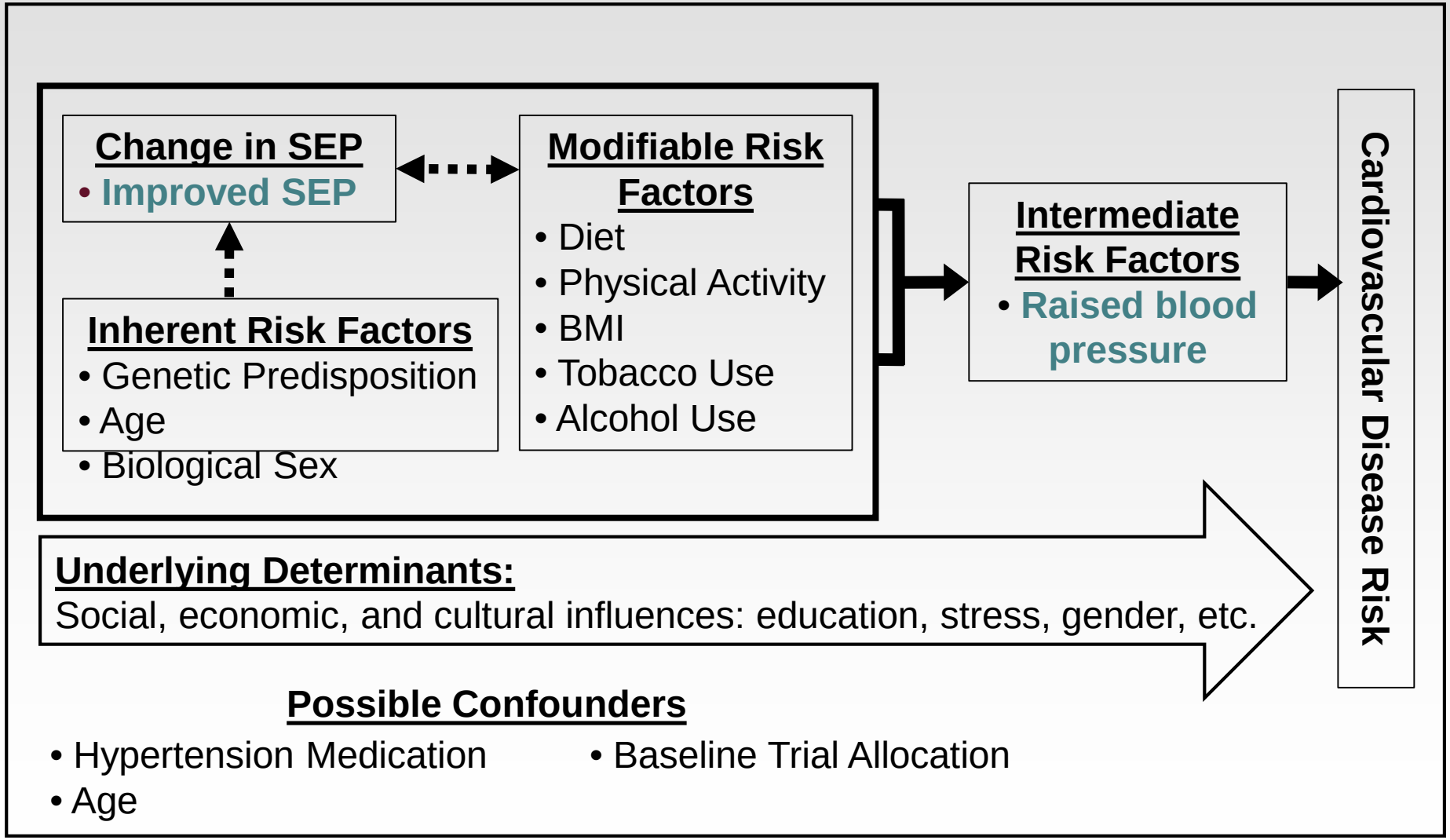
- Research is mostly from high income settings [4, 5]
- "In the CVD literature, support for the social mobility model has been mixed." [6]

In South Asia

- Evidence is still emerging in this region, with limited support for the relationship

[1] Elovainio *et al.* 2011; [2] Chandola *et al.* 2003; [3] Marmot 2004; [4] Samuel *et al*., 2012; [5] Sovio et al., 2012; [6] Walsemann *et al*., 2016 p.148

Conceptual Framework



WHO, 2016

Methods

Design

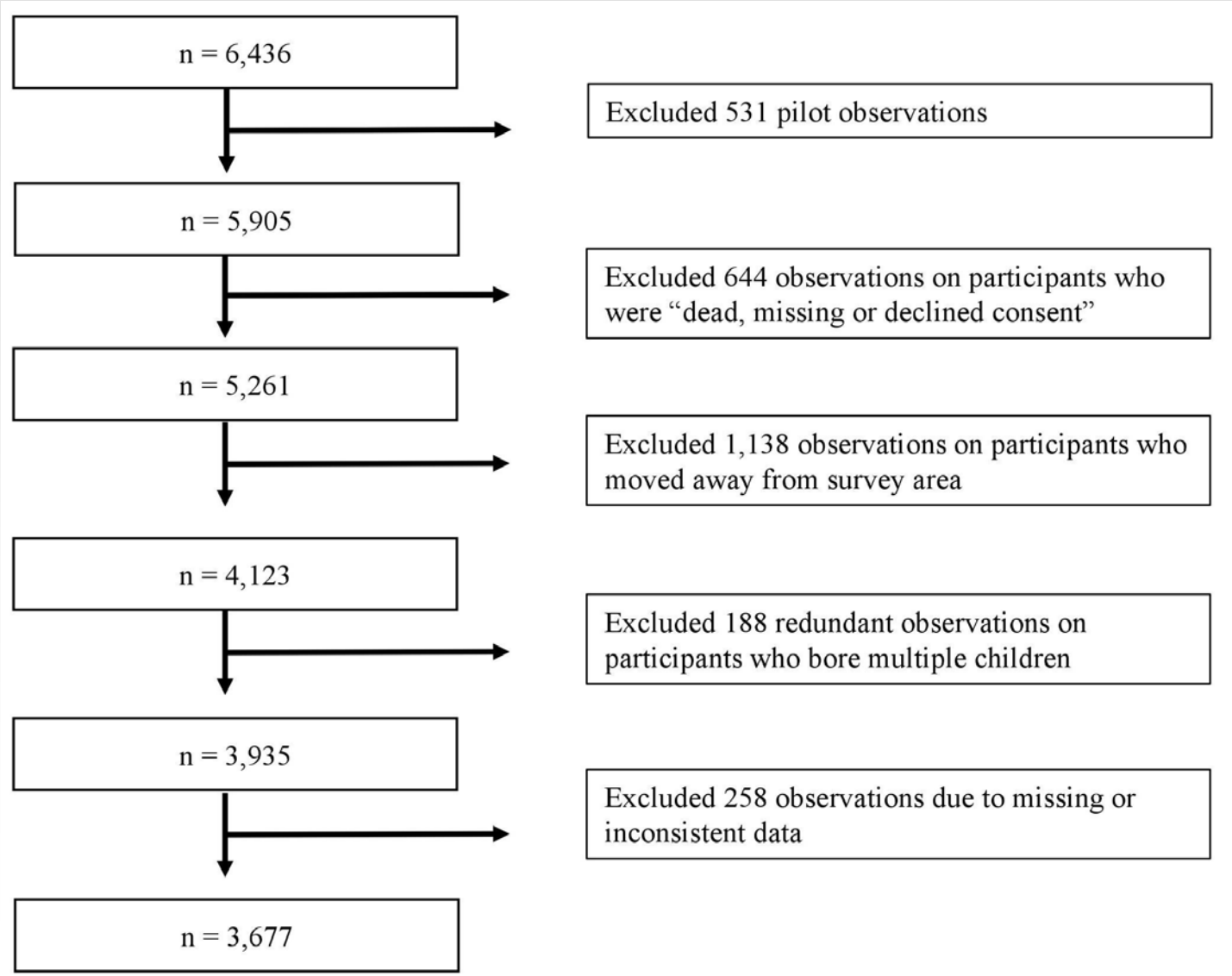
- Long term follow-up cohort study nested w/in a cluster RCT
  - Baseline: 2001-2003 Cluster RCT: Group intervention aimed at improving new-born mortality[1]
    - Closed Questionnaire: including SEP data
  - Follow-up: 2013-2014
    - Used the same questionnaire, with minor changes
    - Collected additional data on cardiovascular health

Variables

- Exposure: Social Mobility – based on two asset scores
- Outcome: Hypertension – 140/90 mm/HG[2]

[1] Manandhar *et al.* 2004; [2] WHO, 2016

The Data Set


n = 6,436
Excluded 531 pilot observations
n = 5,905
Excluded 644 observations on participants who were "dead, missing or declined consent"
n = 5,261
Excluded 1,138 observations on participants who moved away from survey area
n = 4,123
Excluded 188 redundant observations on participants who bore multiple children
n = 3,935
Excluded 258 observations due to missing or inconsistent data
n = 3,677

Methods – continued

Descriptive Analysis

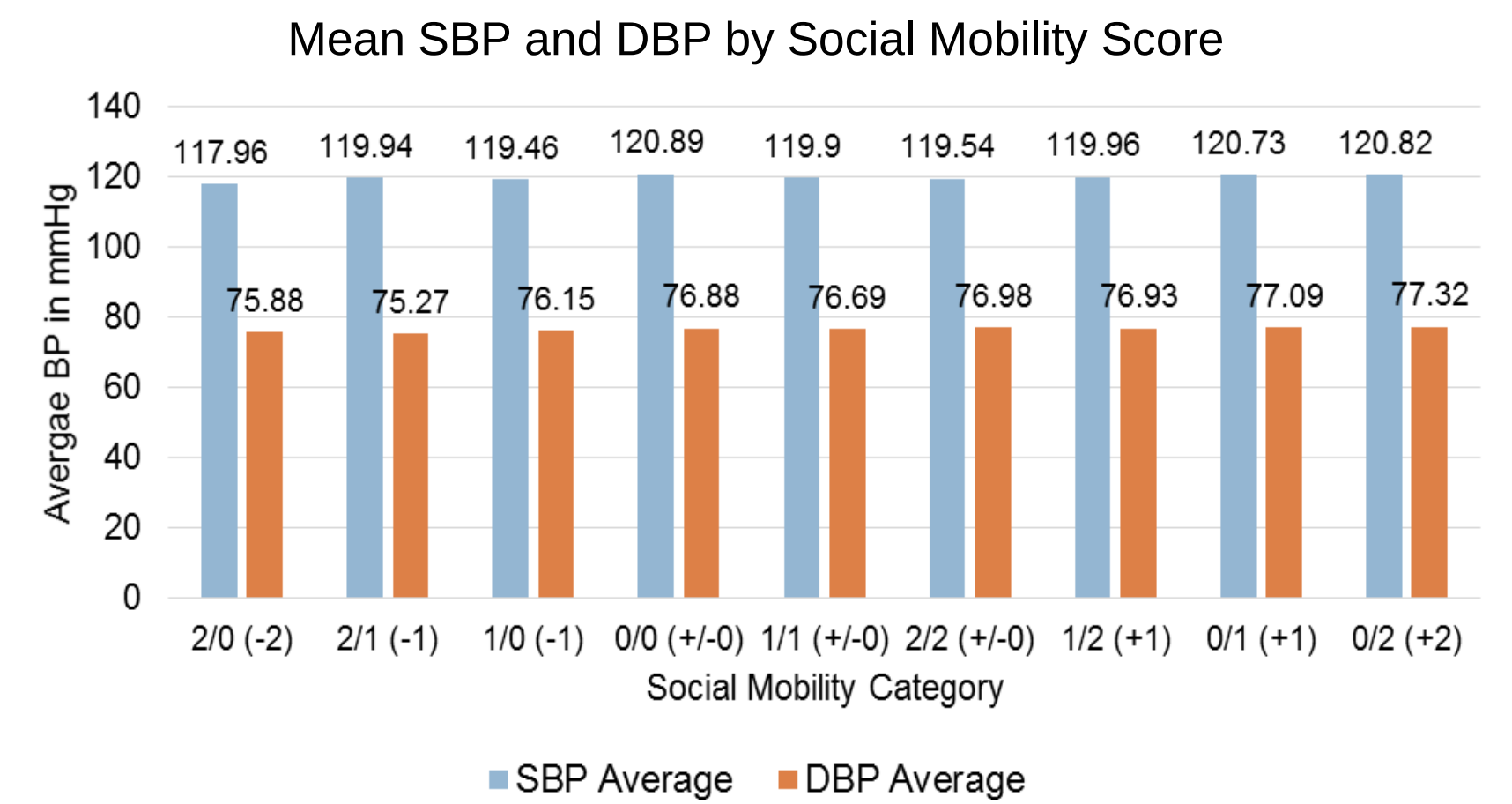
- Change in asset score data
- Distribution of systolic and diastolic blood pressure
- Excluded participants

Statistical Analysis

- Multivariable regression analysis adjusting for: age, blood pressure medication, smoking status and baseline trial allocation

Results

- Average BP in the cohort was 120.3/76.9 mmHG
- 12.7% were hypertensive.



Results – continued

Blood Pressure Measure	9 Point Social Mobility Score		Coefficient	95% CI	P value
SBP		2/0 (-2)	-	-	-
	Downward	2/1 (-1)	1.12	-4.77, 7.01	0.709
		1/0 (-1)	1.22	-3.64, 6.09	0.623
	Static	0/0 (± 0)	2.01	-2.71, 6.73	0.403
		1/1 (± 0)	0.76	-4.09, 5.60	0.760
		2/2 (± 0)	1.13	-3.70, 5.96	0.647
	Upward	1/2 (+1)	1.33	-3.42, 6.07	0.583
		0/1 (+1)	1.56	-3.19, 6.32	0.519
		0/2 (+2)	1.85	-2.88, 6.57	0.443

Note: Model adjusted for participant age at follow-up, use of blood pressure medication in the past 48 hours, participant smoking status, and baseline trial allocation area

Results – continued

Blood Pressure Measure	9 Point Social Mobility Score		Coefficient	95% CI	P value
DBP	Downward	2/0 (-2)	-	-	-
		2/1 (-1)	-0.97	-5.01, 3.07	0.639
		1/0 (-1)	0.18	-3.16, 3.51	0.917
	Static	0/0 (± 0)	0.76	-2.48, 3.99	0.647
		1/1 (± 0)	0.37	-2.95, 3.69	0.828
		2/2 (± 0)	0.61	-2.70, 3.92	0.718
	Upward	1/2 (+1)	0.62	-2.64, 3.87	0.710
		0/1 (+1)	0.83	-2.43, 4.09	0.618
		0/2 (+2)	0.93	-2.30, 4.17	0.572

Note: Model adjusted for participant age at follow-up, use of blood pressure medication in the past 48 hours, participant smoking status, and baseline trial allocation area

Discussion

Comparison to Past Studies

- Relative *vs.* absolute social mobility

Strengths

- Size and community engagement
- Exposure and outcome variable underwent plausibility testing
- Prospective study design ensured data were not subject to recall bias
- Uniqueness of study

Limitations

- Lack of hypertensive data at baseline
- Lack of a continuous measure of household asset score due to the collection of asset data as a categorical measure

Discussion – continued

Generalisability

- The prospective design and representative exposure and outcome variables allow for generalisation of results nationally and within the South Asian region
- All female cohort

Future Research

- Further follow-up would allow for CVD data at baseline and follow-up
- Extension to male and female cohorts
- Consideration of other life-course models

Conclusion

- Change in SEP, as measured by household asset score over more than a decade, was not found to be associated with blood pressure at mean age 38.9 in this cohort
- The explanatory power of the social mobility model proved ineffective in this transitioning rural low income setting

Acknowledgments

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Questions or Comments?

Income-related inequity of health care utilization in rural China:

Evidence from a longitudinal household survey from 2000 to 2006

Miaoqing Yang

2nd November

RAND EUROPE

Motivation

- **Before 2003**
  - Health care financing relied heavily on OOP
  - Pro-rich inequity in health and health care
- **Since 2003**
  - A nationwide health care reform
    - To achieve **affordable** and **equitable** basic health care for all citizens by 2020

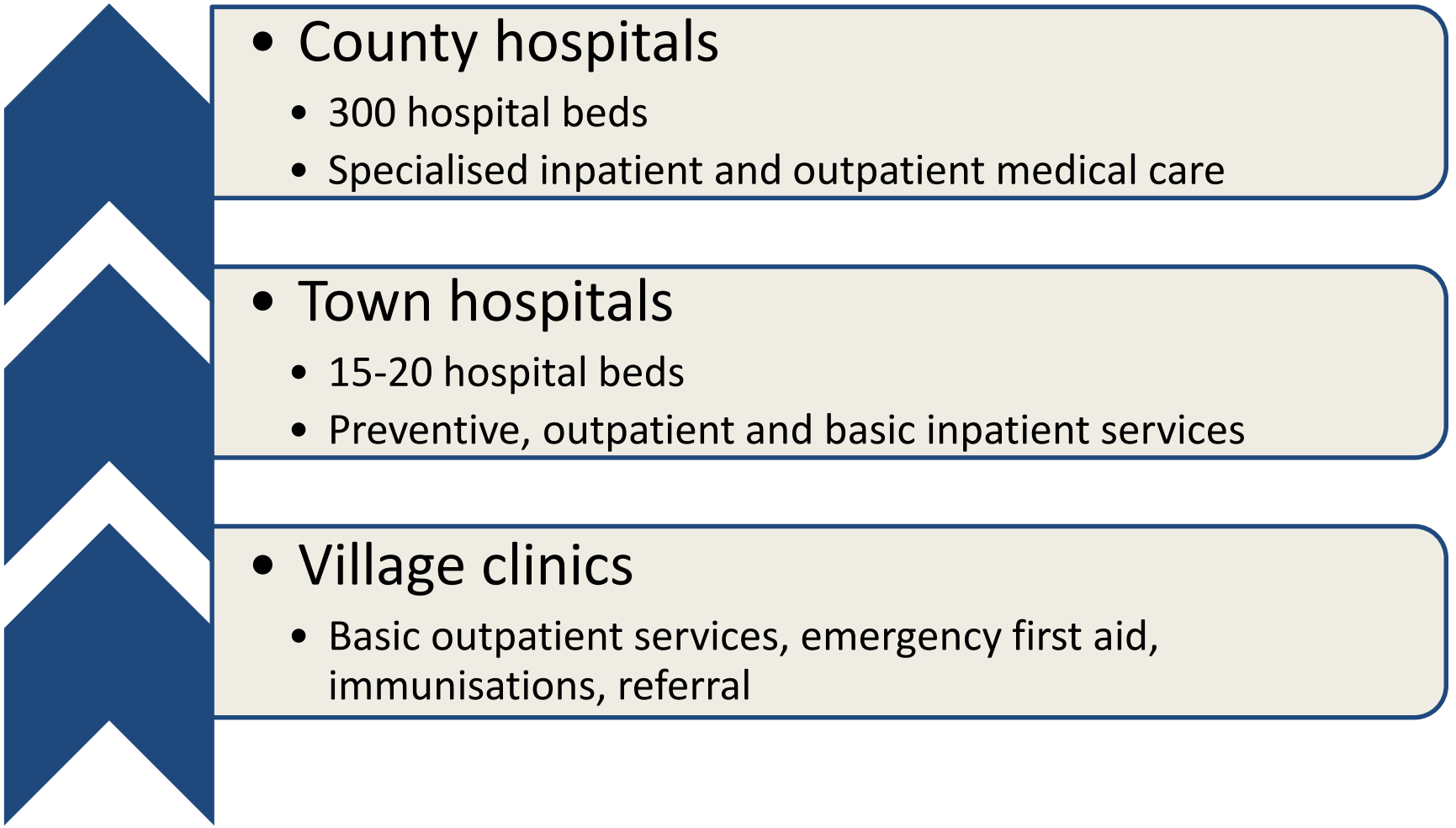
Research question

- **Income-related inequity in health care utilization**
  - Different types of health services and facilities
  - Horizontal inequity
  - Decomposition into need and non-need factors
- **Two major issues:**
  - Whether equity in health care utilization improved after recent health care reforms
  - How much do non-need factors drive the inequity in health care utilization

Main results

- **Inequity in health care utilization**
  - pro-rich inequity in the use of preventive care, inpatient care, county hospitals and private clinics
  - pro-poor inequity in the use of folk doctors and village clinics
- **Decomposition analysis**
  - Recent health care reforms have little contribution to equitable access to health services

THREE-TIER RURAL HEALTH SYSTEM



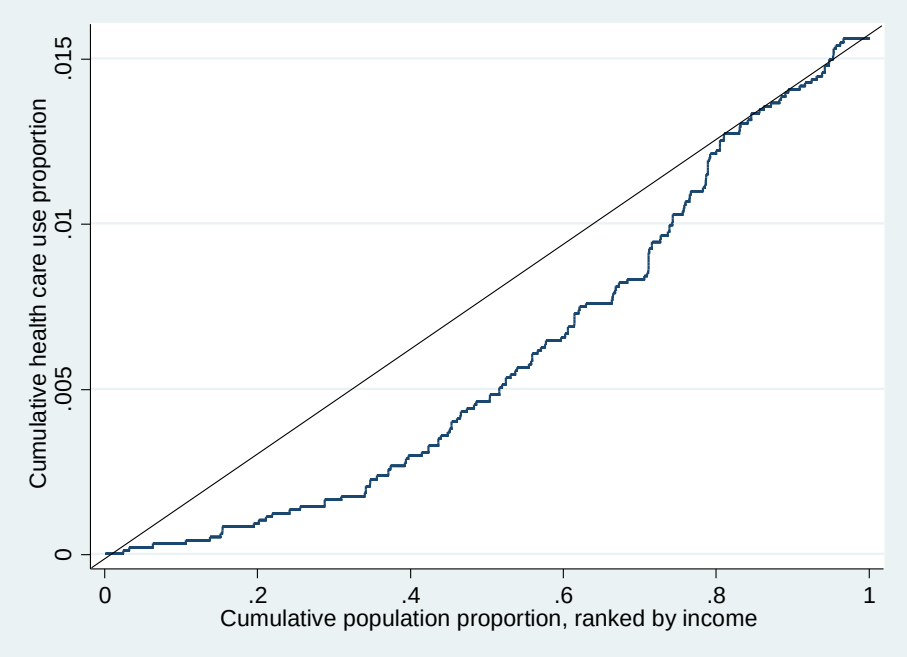
Main contributions

- **Inequity in the use of different levels of health facilities**
  - public: village clinics, town hospitals, county hospitals, city hospitals
  - private: private clinics
- **Based on a large-scale longitudinal dataset**
  - 9 of China's 31 provinces
  - 3 waves of data, before and after the reform
- **Control for more independent variables**
  - Number of major diseases, symptoms, severity of the illnesses

DATASET

- **China Health and Nutrition Survey (CHNS)**
  - Panel data in 1989, 1991, 1993, 1997, 2000, 2004, 2006, 2009 and 2011
  - 9 of China's 31 provinces, 44% of the population
  - Individual, household and community surveys

Concentration curve and index



- $C = 1 - 2\int_0^1 L_h(p)dp$
- $y_i = \alpha_1 + \beta_1 r_i + \varepsilon_i$
- $CI = (\frac{2\sigma_r^2}{\widehat{\mu}})\widehat{\beta_1}$
- $EI = \frac{4\mu}{(b_y - a_y)} CI$

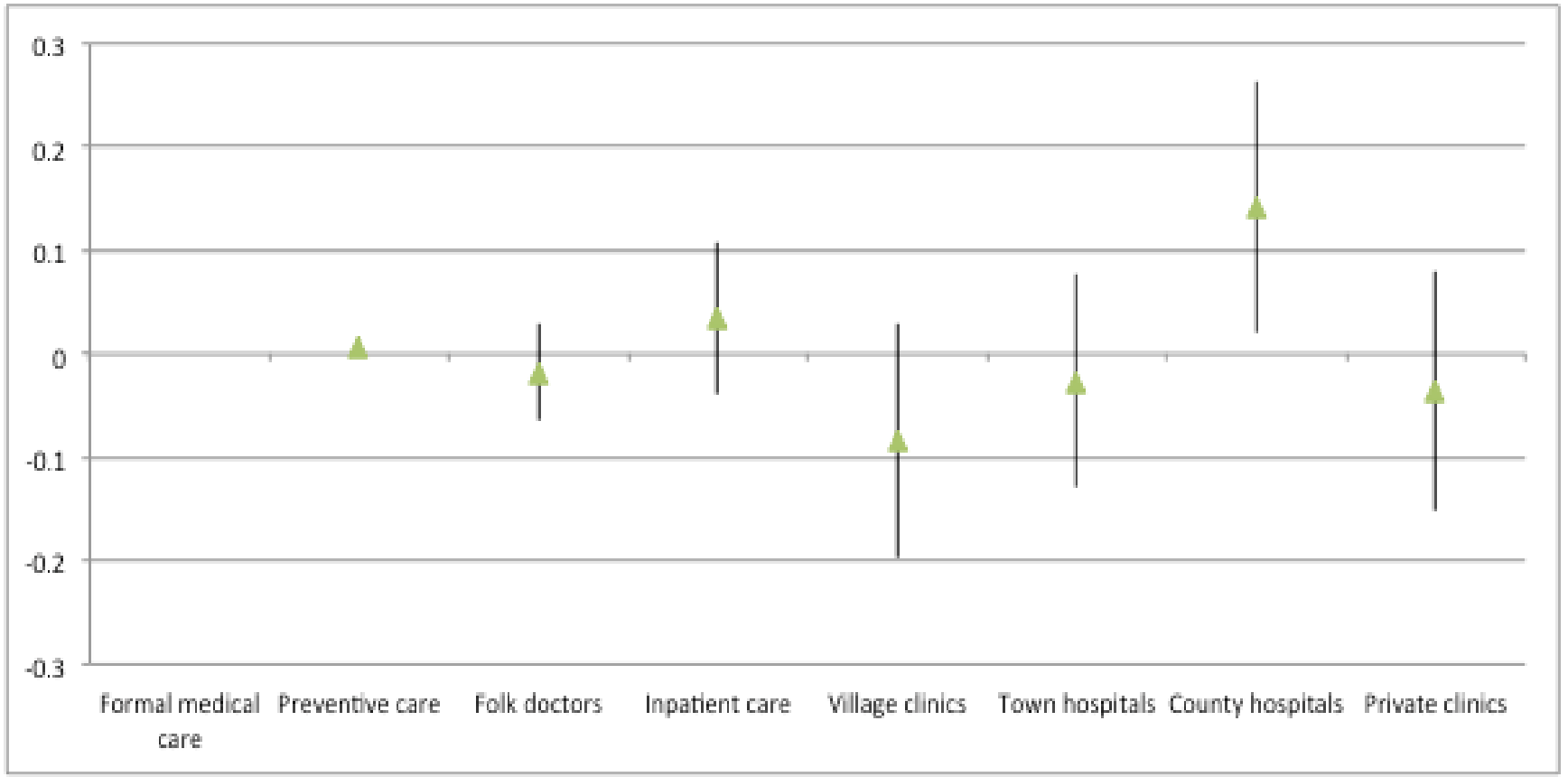
Indirect standardization for utilization

- **A linear model for health care utilization**
  - $y_i = \alpha + \sum_j \beta_j x_{ji} + \sum_k \gamma_k z_{ki} + \varepsilon_i$
- **Need-expected health care use**
  - $\hat{y}_i^X = \hat{\alpha} + \sum_j \widehat{\beta_j} x_{ji} + \sum_k \widehat{\gamma_k}\overline{z_k}$
- **Need-standardized health care use**
  - $\widehat{y_i}^{IS} = y_i - \hat{y}_i^X + \overline{y_i}$

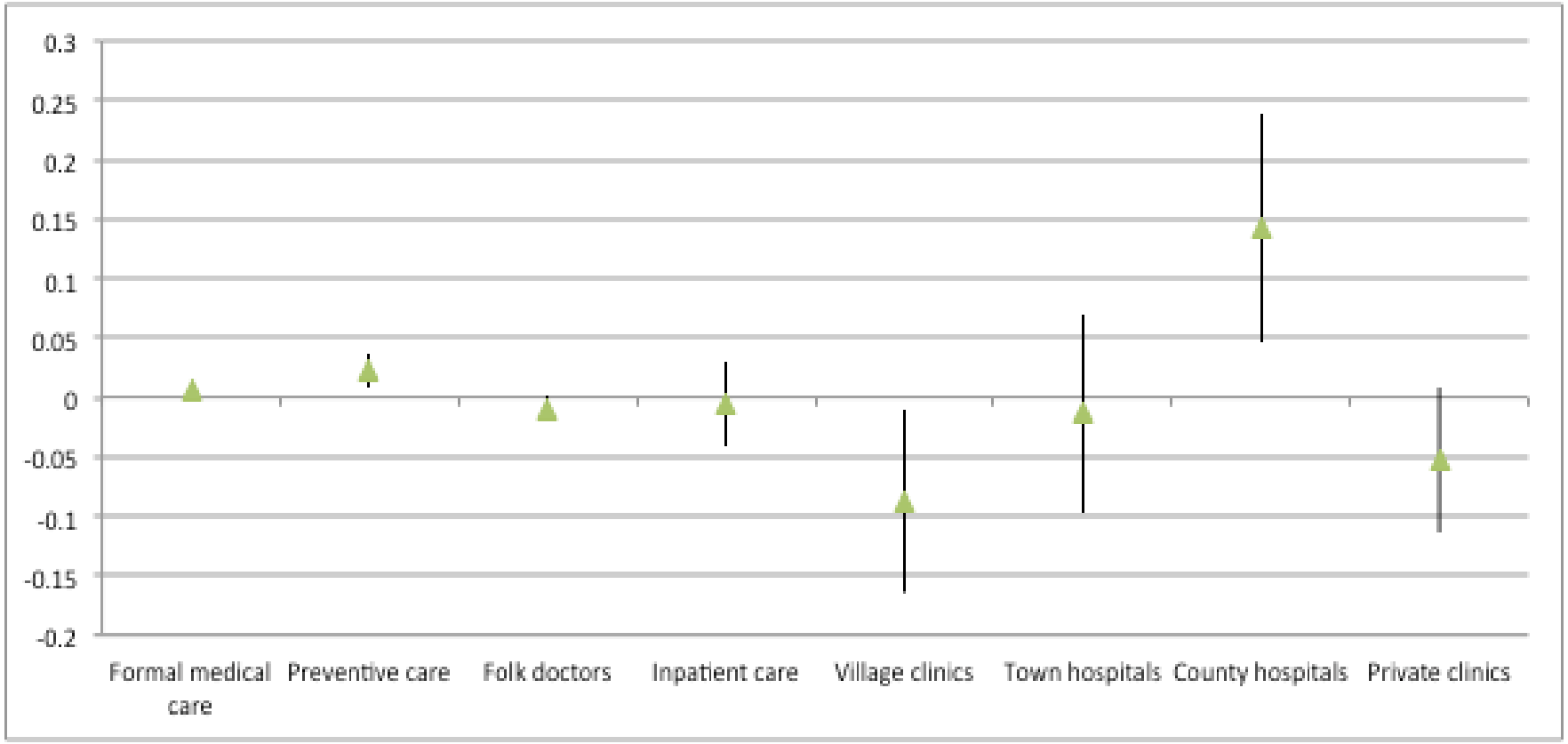
Decomposition analysis

- **A linear model for health care utilization**
  - $y_i = \alpha + \sum_j \beta_j \, x_{ji} + \sum_k \gamma_k \, z_{ki} + u_i$
- **Decomposition of CI**
  - $CI = \sum_j (\beta_j \, \overline{x_j}/\mu) C_j + \sum_k (\gamma_k \, \overline{z_k}/\mu) C_k + GC_u/\mu$
- **Decomposition of EI**
  - $EI = 4 * \left[\sum_j (\beta_j \, \overline{x_j}) C_j + \sum_k (\gamma_k \, \overline{z_k}) C_k + GC_u\right]$

EI in 2000


0.3
0.2
0.1
0
-0.1
-0.2
-0.3
Formal medical care
Preventive care
Folk doctors
Inpatient care
Village clinics
Town hospitals
County hospitals
Private clinics

EI in 2004


0.3
0.25
0.2
0.15
0.1
0.05
0
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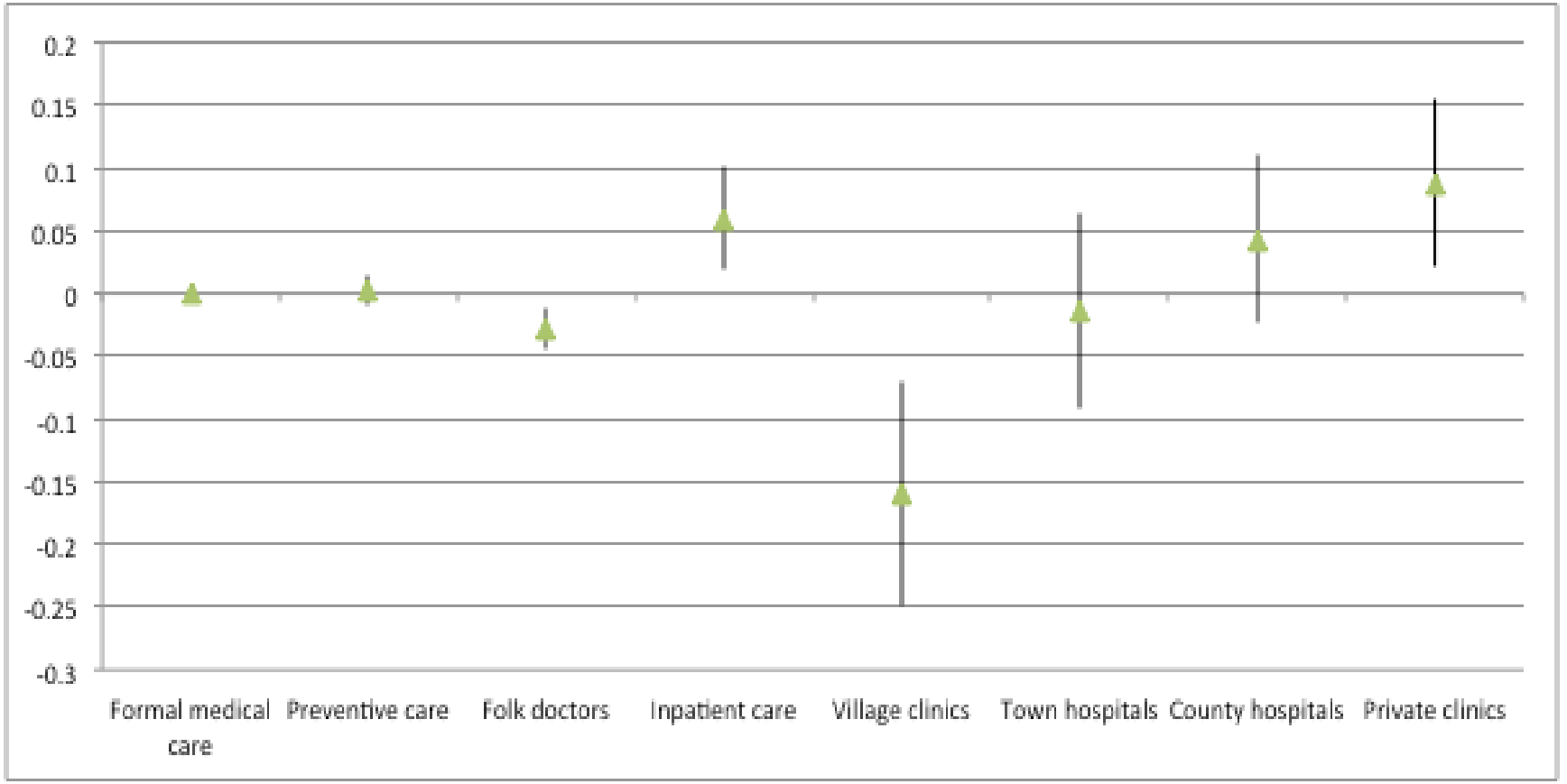
-0.1
-0.15
-0.2
Formal medical care
Preventive care
Folk doctors
Inpatient care
Village clinics
Town hospitals
County hospitals
Private clinics

EI in 2006


0.2
0.15
0.1
0.05
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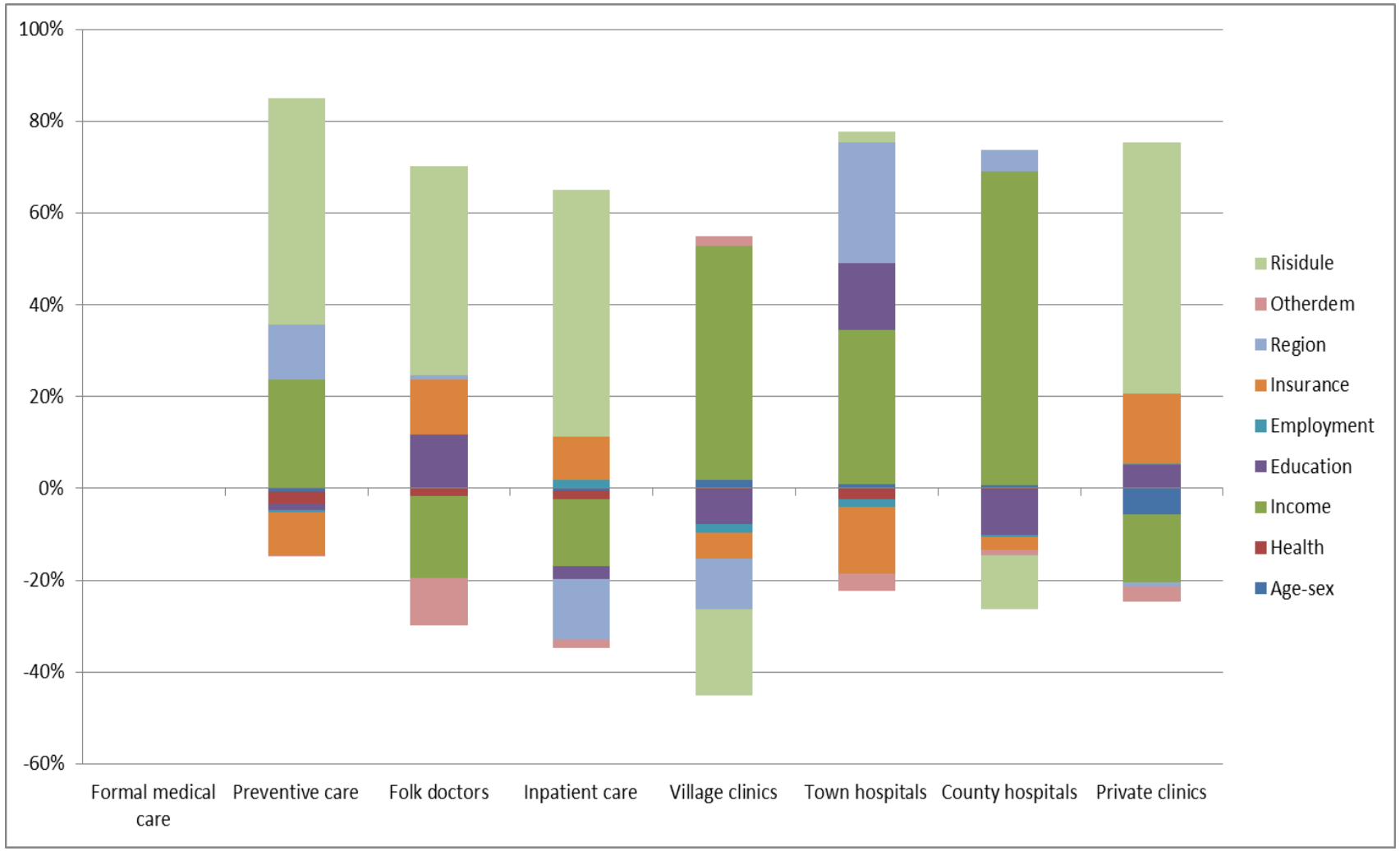
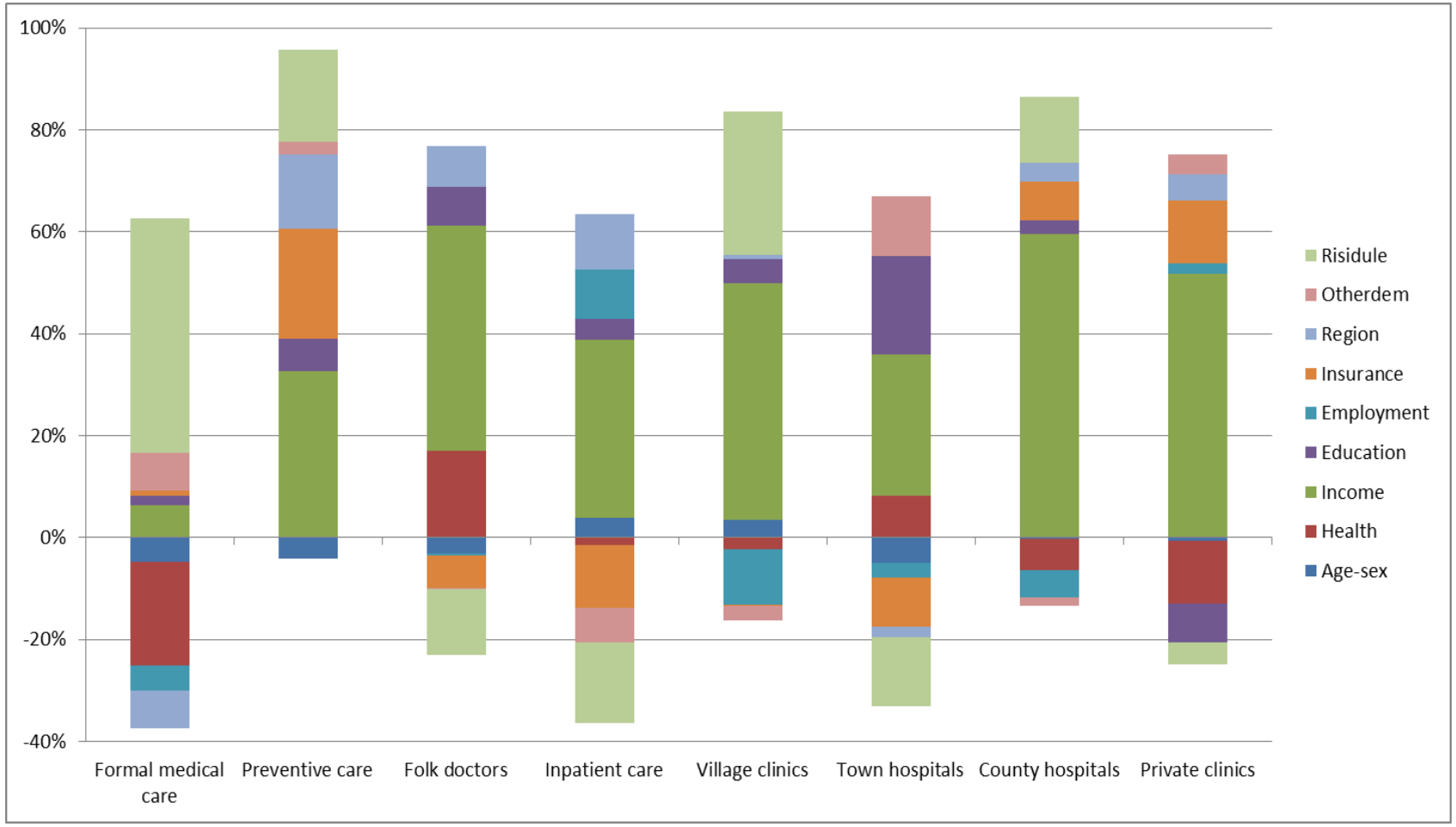
-0.05
-0.1
-0.15
-0.2
-0.25
-0.3
Formal medical care
Preventive care
Folk doctors
Inpatient care
Village clinics
Town hospitals
County hospitals
Private clinics

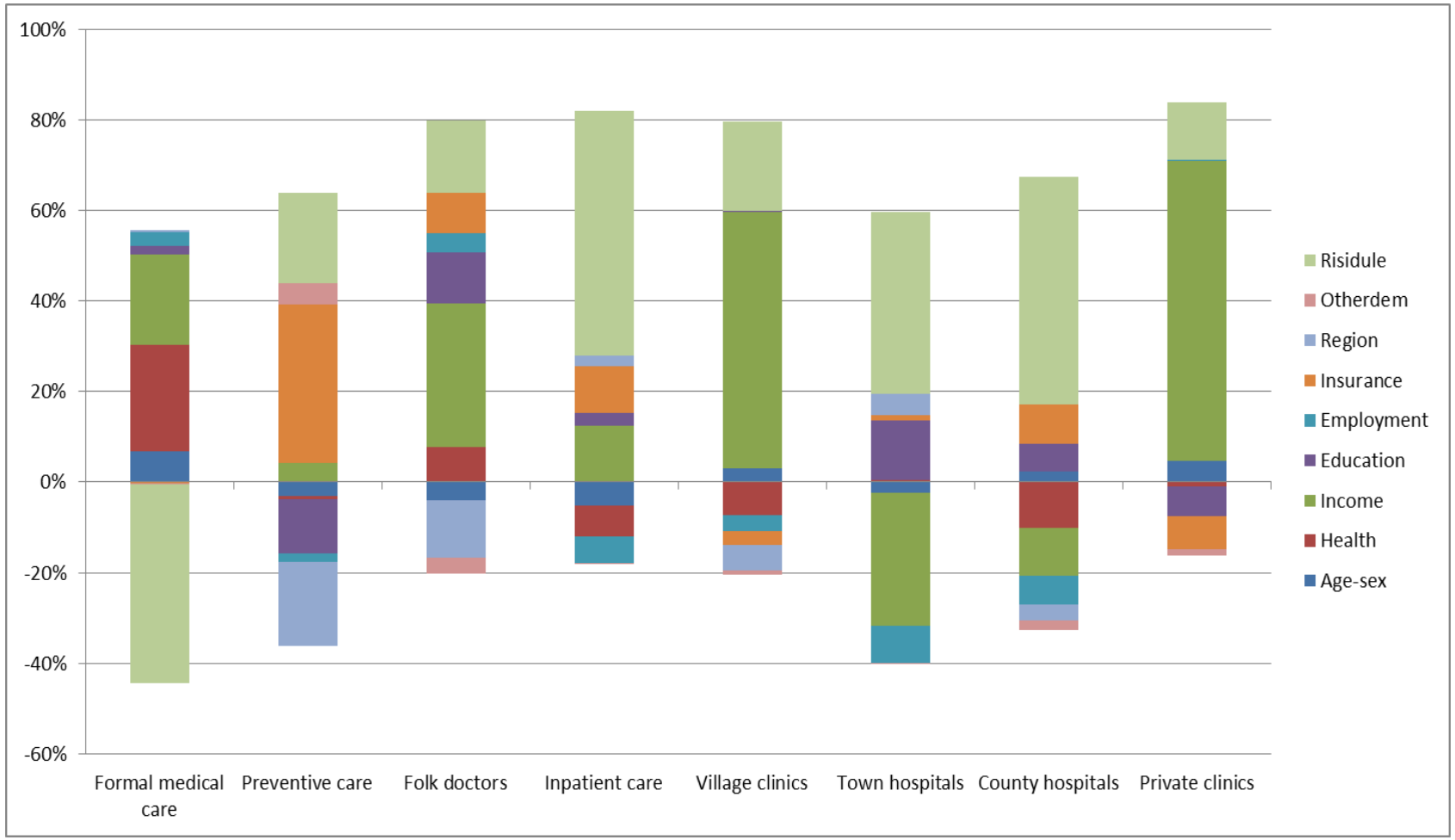
Decomposition of EI in 2000



Decomposition of EI in 2004



Decomposition of EI in 2006



Conclusion

- Rich people are significantly more likely to obtain better health services than the poor
- Income contributes the most to the inequity of health service use
- Social health insurance
  - Pro-poor contribution but small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