

P69

# THE SOFTER THEY FALL: A NATURAL EXPERIMENT EXAMINING THE HEALTH EFFECTS OF JOB LOSS BEFORE AND AFTER FORNERO'S UNEMPLOYMENT BENEFIT REFORMS IN ITALY

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10.1136/jech-2019-SSMabstracts.220

**Background** The Fornero unemployment benefit reforms in Italy increased replacement rates from 60% to 75% for first six months of unemployment, beginning January 1st, 2013. We exploit the roll-out of this reform as a natural experiment to evaluate whether those experiencing job loss in 2011 or 2012 (N=75) endured greater declines in health compared to those experiencing job loss in 2013 or 2014 (N=127).

**Methods** We utilize data from the Italian version of EU-Survey on Income and Living Conditions (SILC), longitudinal sample (2010–2014), yearly data supplemented with retrospective monthly calendar data. To construct our treatment and control groups we apply a series of restrictions in order to isolate those who were highly likely to have been affected by the pre and post-Fornero unemployment benefit regimes. Our dependent variable is change in self-rated health. To test our hypotheses, we implement difference-in-difference modelling, adjusting for gender, interview month, household income, region of residence, whether the respondent has any chronic illness, occupation, and marital status.

**Results** Our difference-in-difference estimate for changes in health following job loss pre and post Fornero reforms is statistically significant (ATT=0.349,  $p<0.01$ ). This corresponds to almost no change in self-rated health in the post-Fornero treatment group ( $\Delta$  Health=0.032), and a decline in health for the pre-Fornero control group ( $\Delta$  Health=-0.317). These models are robust to several alternative specifications.

The decline in health for the pre-Fornero group represents 0.43 of a standard deviation for health change. For effect size comparison, the negative association between reporting any chronic illness and health change corresponds to 0.33 of a standard deviation (adjusting for age and sex).

**Conclusion** While the links between unemployment and health are well documented, very little is known about specific policy contexts that may mitigate the health-effects of job loss. This study leverages a novel research design to shed new light on the ways that institutional factors may modify the social determinants of health at the individual level.

P70

# ASSOCIATION BETWEEN BUILT ENVIRONMENT AND CARDIOVASCULAR DISEASES

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10.1136/jech-2019-SSMabstracts.221

**Background** Although increasing interest in the role of built environments that can influence residents' health and health behavior, little is known about the relationship between built environment and cardiovascular diseases (CVD). Therefore, this study was carried out to examine the association between

objective measured built environment and CVD among adults in Gyeonggi province, Korea.

**Methods** A total of 50,958 individuals living in 546 administrative districts of Gyeonggi province were analyzed. Individual data were obtained from the Korean Community Health Survey (KCHS). The CVD outcomes were self-reported history of physician diagnosis of hypertension, dyslipidemia, myocardial infarction, angina, and stroke. Built environment measures were created for 546 administrative districts of Gyeonggi province using Korean government databases (National Public Physical Activity Facility Database 2013, Korean Transport Database, Population Census 2013 and National Building Database 2013) and ArcGIS software. A Bayesian spatial multi-level model was implemented separately by age group (i.e. 40–50 years or  $\geq 60$  years).

**Results** After considering the individual- and neighborhood-level factors as well as the spatial variation in the model, living in neighborhoods with a middle-level distance to physical activity facilities (T2) was associated with 11.3% increased odds for CVD in elderly people over 60 years, compared with living in neighborhoods nearest to physical activity facilities (OR=1.11, 95% CI=1.003–1.236 for T2 vs. T1). For adult 40–59 years, no built environment significantly influenced CVD.

**Conclusion** The findings suggest that built environment that provided more opportunities for physical activity was negatively associated with CVD, practically in elderly people. Further research to examine the spatio-temporal association is needed to better understand the causality of the relationship between built environment and CVD.

P71

# THE INCIDENCE OF FIRST SEIZURES, NEW DIAGNOSIS OF EPILEPSY, AND SEIZURE MIMICS IN A DEFINED GEOGRAPHIC REGION IN IRELAND

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10.1136/jech-2019-SSMabstracts.222

**Background** Epilepsy is a disorder of the brain characterized by an enduring predisposition to generate epileptic seizures and by the neurobiologic, cognitive, psychological, and social consequences of this condition [1]. Studies adherent to international epidemiologic guidelines and epilepsy classification are needed to accurately record the incidence of isolated seizures and epilepsy within a population [2]. Because the diagnosis of epilepsy is largely made through clinical assessment, seizures and epilepsy are susceptible to misdiagnosis. Previous epidemiological studies in epilepsy have not captured or explored 'seizure mimics'.

**Methods** During the calendar year 2017, multiple overlapping methods of case ascertainment were applied to a defined geographic region to identify all patients presenting with first seizures (provoked and unprovoked), new diagnoses of epilepsy, and seizure mimics. Seizures among children, except neonatal seizures and febrile seizures, were included. Potential first seizures and new diagnosis of epilepsy were identified in real-time but classified retrospectively as definite, probable or possible based on available evidence in accordance with the