

# Conclusions of the SOPHIE Project



**Social and economic policies matter for health equity**

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SOPHIE is a collaborative research project, coordinated by Agència de Salut Pública de Barcelona, that has received funding from the European Community's Seventh Framework Programme (Grant Agreement 278173) from November 2011 to October 2015.  
More information: [www.sophie-project.eu](http://www.sophie-project.eu)

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Cover photo: nikolaev (123rf.com)

Published and printed by: Addenda  
Barcelona, September 2015

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# Executive summary

## Social and economic policies can help reduce health inequalities

Over the past few years, SOPHIE has accumulated evidence regarding the influence of social and economic policies on the level of health across the population and on the degree to which health inequalities are influenced by socioeconomic, gender and immigration factors. At the same time, SOPHIE has shown — through the analysis of several examples across Europe — how equity-oriented policies can ameliorate these health inequalities. These studies can help public health and social justice advocates build a strong case for fairer social and economic policies that will lead to the reductions in health inequalities that most governments have included among their goals.

## Our findings and their policy implications

**Economic recessions, fiscal policies and health.** The impact of the Great Recession on health in Europe varies depending on the health indicator in question, the levels of social protection offered by particular countries as well as one's gender and socioeconomic status. Social protection policies appear to be effective in limiting the influence of macroeconomic fluctuations on mortality rates. In addition, interventions aimed at protecting and promoting mental health, preventing suicides, treating mental disorders and preventing alcohol abuse become especially significant in times of economic hardship.

Even though recessions may have the effect of reducing short-term mortality, those positive effects may be more than offset by the increases in mortality brought on by austerity policies, at least in the case of some causes of mortality.

**Generous social protection policies reduce poverty and improve health.** Generous unemployment insurance policies reduce material hardship and psychological distress for unemployed and employed people alike. Health benefits can result from enhancements to unemployment insurance generosity, such as measures that ensure that the majority of unemployed individuals receive unemployment benefits;

flexible eligibility criteria that include situations such as seasonal work, reduced hours and self-employment; an adequate income replacement rate that meets the cost of living a healthy life; short or no waiting periods between a job loss and the receipt of benefits; and the continuance of benefits throughout the entire period of unemployment.

A large proportion of new onset of chronic illness can be attributed to unemployment. Policy interventions that maintain employment and rapidly return the unemployed back to the workforce can reduce the burden of chronic conditions on European health care systems.

Generous family support policies are predictive of reductions in child poverty. Higher levels of spending on active labour market policies are linked to better population health. Efforts to oppose cuts in social protection programmes are successful when the target group is politically powerful.

**High quality employment in a regulated labour market is beneficial for workers' health and reduces inequality.** To measure and monitor precarious and informal employment situations and their impact on health, standardised definitions and indicators, as well as improved surveys and information systems, must be developed. Employment conditions and job quality, as they relate to health inequalities, differ between and within EU countries. The growth of precarious employment must be halted, and jobs should become more secure and of better quality in order to protect the health and well-being of workers and to reduce health inequalities. Employment security and the quality of psychosocial working conditions and work-family balance should be improved. This improvement should also apply to self-employment and micro-enterprise situations. Labour market policies governing employment protection, part-time arrangements and workplace safety impact on workers' health.

**Urban planning impacts health equity.** Social and functional mixing, density, safety and accessibility all matter when it comes to health. The way cities manage urban planning makes a difference in the health of residents, particularly that of women and the elderly. Policies aimed at achieving 'equal' access to recreational facilities, markets and other core public services may not suffice. Deprived neighbourhoods may need more tailor-made investments to benefit from the health-promoting capacities of urban density, access to public spaces and facilities, and a vital mix of functions.

As an example, the health of populations in the most deprived areas could benefit from investments in urban regeneration. Urban renewal projects have been shown



to have a positive impact on self-reported health. They are also associated with decreased socioeconomic health inequalities and increases in healthy behaviours, but not with reductions in road traffic injuries.

**Housing policies can reduce health inequalities.** A large body of literature shows the link between inadequate housing conditions and poor physical and mental health. In Europe, housing conditions related to fuel poverty are unevenly distributed and affect health. Housing insulation for fuel-poor households can improve health and reduce cold-related mortality. Policies on housing energy efficiency can reduce the health consequences of fuel poverty, but need to be free to users, target the most affected groups and be adapted to their needs.

Public policies that tackle housing instability and its consequences are urgently needed. This is especially true in Southern European countries, where people facing housing exclusion experience intense levels of mental distress. Access to secure and adequate housing can improve the health of these populations.

**Gender policies influence gender inequalities in health.** Gender inequalities in health are larger in countries with policies less oriented towards gender equity. Policies that support women's participation in the labour force and decrease their burden of care, such as increasing public services and support for families and entitlements for fathers, are related to lower levels of gender inequalities in terms of health. Parental leave for both parents with universal coverage and earning replacement combined with working time flexibility to balance family demands seem to contribute to equalising time use between genders. Public services and benefits for disabled and dependent people can reduce the burden placed on their family caregivers and hence improve caregivers' health.

**Integration policies make a difference on immigrants' health.** Different integration policy models across Europe appear to make a difference on immigrants' health. Immigrants in 'exclusionist' countries — with severe restrictions on access to citizenship and few integration policies — suffer from poorer health, higher levels of depression and mortality. Therefore, adopting restrictive policies in areas related to immigrants' integration may bring health consequences. Within the healthcare sector, legal barriers to public system entitlement hinder immigrants' access to necessary care.

## Lessons learned on the research process that can inform future studies

Evaluating structural policies is a new methodological challenge. Mixed methods are essential to such evaluation, and we found that a combination of quantitative and qualitative methods, as well as realist approaches, yielded evidence that was strong, rich and relevant.

Quantitative cross-national comparisons provided new data on association between broad policy ‘regimes’ and health inequalities, especially in new researched fields. Most comparative studies would not have been possible without the many European-wide surveys initiated in the last 10 to 15 years, and we strongly recommend further development of these surveys.

When available, quasi-experimental data (e.g. time-trend or pre-post intervention-control) could yield stronger evidence, even though such data usually refer to specific interventions with limited impact — in sharp contrast to the current magnitude of health inequalities.

Despite several challenges in their application, realist approaches do help to address new and vital questions about how policies achieve impacts and under which conditions. Moreover, as the impacts of changing contexts and policies differ at the intersection of different axes of inequality, the intersectionality perspective should be taken into account in the design and evaluation of policies and reinforced in the research carried out on health inequalities.

Community and civil society participation in health equity research is a costly, long-term yet worthwhile process. The participation of affected populations and frontline professionals adds validity to policy evaluations and research, and the voice of frontline organisations is highly valued by society and can maximise the impact of research. Face-to-face contact, respect and gaining trust are key for the effective involvement of stakeholders in research and in the use of findings.

Complementary to scientific dissemination, social media are effective channels for broadening the reach of politically relevant research. Researchers should make efforts to actively disseminate their work on and knowledge of the social and political determinants of health through emerging social channels, and agencies and research institutions should back these efforts.

# Economic recessions, fiscal policies and health

## Has the Great Recession been bad for health? It depends.

**Why is it important?** Recessions – by their very nature – are associated with severe adverse economic effects, as they bring with them higher unemployment and poverty rates. What appears less clear is what the health effects of recessions have been, and in particular those of the recent recession (the ‘Great Recession’) that began in 2008. Knowing what the likely effects of recessions are may serve to inform policy in ways that could mitigate or prevent any adverse effects on health.

**What we did.** We assessed the impact of macroeconomic fluctuations (including recessions and booms) on a battery of overall and cause-specific mortality rates for a group of European Union countries. We examined in particular the effect of the Great Recession. To this end, we carried out a regression analysis using annual, by-country data on mortality rates, health behaviour proxies as well as socioeconomic and demographic indicators for 23 European countries. The data covered the period from 2000 to 2010 and were taken from WHO and Eurostat databases.

**What we found.** Overall, during the recent recession, a 1% increase in the standardised unemployment rate has been associated with statistically significant reductions in all-cause-mortality, cirrhosis- and chronic liver disease-related mortality, motor vehicle accident-related mortality and parasitic infection-related mortality. At the same time, it has also been associated with an increase in the suicide rate. In general, the effects were more marked in countries with lower levels of social protection, compared to those with higher levels (FIGURE 1).<sup>1</sup>

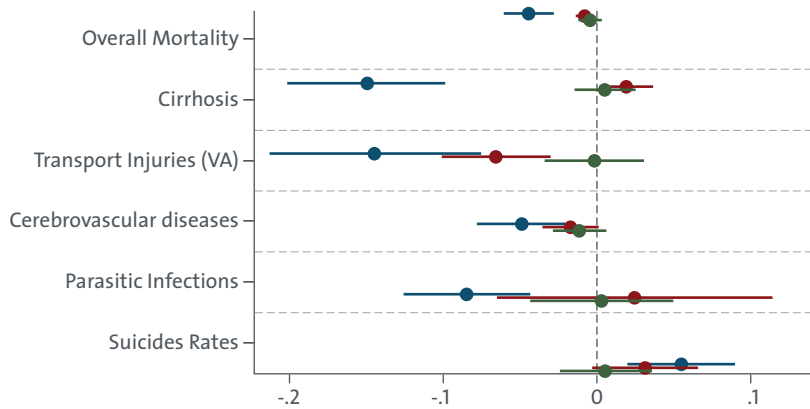
In a more methodological study we found that the effects of recessions on mortality do differ in key ways depending on the specific methodology applied.<sup>2</sup>

A detailed country-specific analysis on Spain provided a more complex picture of the health effects resulting from recessions: while we confirmed the counter-intuitive result that a recession, even one that has been as severe as the recent Spanish one, may have improved overall self-reported health, certain dietary behaviours as well as mental health in men were shown to have deteriorated, while other inequalities in health and health behaviour relating to socioeconomic factors widened.<sup>3,4</sup>



Photo: Samuel Sánchez

**FIGURE 1.** THE EFFECT OF MACROECONOMIC FLUCTUATIONS ON SELECTED MORTALITY RATES BY SOCIAL PROTECTION LEVEL, DATA FROM 23 EUROPEAN COUNTRIES FOR THE PERIOD 2000-2010.



Estimated Coefficients of Unemployment Rate with a 95% CI by Country Level of Social Protections

● Low Social Protection

● Medium Social Protection

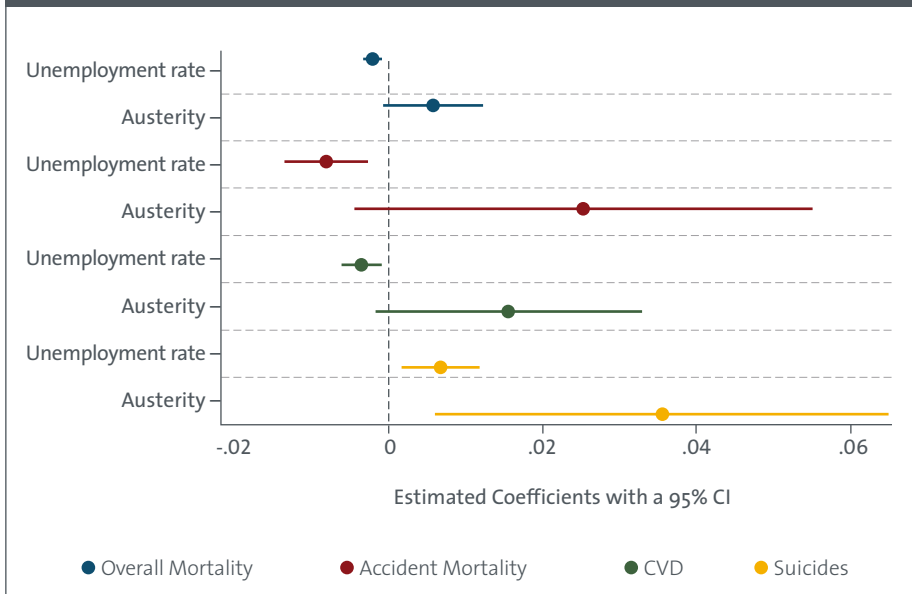
● High Social Protection

## While recessions may have reduced mortality rates, austerity regimes appear to have increased them.

**Why is this important?** Some have also argued quite strongly that austerity policies are responsible for some deterioration in health care and health outcome indicators. Yet it is not easy to separate the effects of recession from those of austerity, as both often coincide. Again, knowing how health has been affected is important, as it provides a more complete picture of the costs (and benefits) of austerity policies.

**What we did.** We assessed the impact of austerity policies, while controlling for the impact of recession, on a set of overall and cause-specific mortality rates, again for a group of EU countries. In order to measure austerity, we borrowed an indicator that has commonly been used in macroeconomic literature (the Blanchard Fiscal Index) and included it in our standard regression model as an additional explanatory variable. The data were from 23 European countries and covered the 1991-2011 period.<sup>5</sup>

**FIGURE 2.** THE EFFECT OF RECESSIONS AND AUSTERITY ON SELECTED MORTALITY RATES BASED ON DATA FROM 23 EUROPEAN COUNTRIES FOR THE PERIOD 1991-2011.



**What we found.** Using – for the first time in a study of this nature – a direct measure of austerity policies, we found that austerity is associated with an increase in all-cause mortality, injury mortality, cardiovascular disease mortality and suicide mortality across Europe (FIGURE 2). However, when austerity was shown to increase mortality, that effect was partly offset by a decrease in mortality (with the exception of suicides) associated with recessions. In this case mortality appeared to receive a double ‘boost’ from both austerity and recessions.<sup>5</sup>

### IN FOCUS | Economic crises and alcohol consumption: a realist systematic review<sup>6</sup>

Economic crises are complex events that affect behavioural patterns (including alcohol consumption) via opposing mechanisms. Through this realist systematic review, we aimed to investigate evidence from studies of previous or current crises in which mechanisms play a role among which individuals, in order to understand and predict the potential impact of economic crises on alcohol consumption.



Photo: antonog (123rf.com)

We found 16 studies with evidence on two behavioural mechanisms by means of which economic crises can influence alcohol consumption and alcohol-related health problems. The first mechanism suggests that psychological distress triggered by unemployment and reductions in income can exacerbate problems associated with alcohol consumption. The second mechanism suggests that tighter budget constraints result in less money being spent on alcoholic beverages. Across many countries, the psychological distress mechanism was observed mainly in men. The tighter budget constraints mechanism seems to play a role in all population subgroups across all countries covered in the these studies. For other mechanisms (i.e. deterioration in the social situation, fear of losing one’s job, and an increase in non-working time), empirical evidence was scarce or absent or did not provide sufficient coverage. This review suggests that among men (but not among women), the net impact of economic crises will be an increase in harmful drinking. This could potentially contribute to an increase in gender-related health inequalities during a crisis.

## Policy implications

- Even though recessions may reduce mortality in the short term, such effects may be more than offset by increased mortality resulting from austerity policies, at least in the case of some causes of mortality.
- Social protection policies appear to be effective in limiting changes in mortality attributable to macroeconomic fluctuations.
- Interventions to protect and promote mental health, to prevent suicides and to treat mental disorders become particularly significant in times of economic hardship.

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# Generous welfare policies reduce poverty and improve health

## Generous unemployment insurance policies reduce material hardship and psychological distress for the unemployed

**Why is this important?** There is evidence to support the link between unemployment, poverty and ill health. Limited work has examined the mediating impacts of unemployment insurance on poverty and health problems, and differences existing between countries in this regard can be associated with differences in the levels of generosity found in their unemployment insurance systems.<sup>1,2</sup>

**What we did.** We have conducted a realist review to examine how and why unemployment insurance impacts poverty and health in a number of welfare states.<sup>3</sup>

**What we found.** The generosity of unemployment insurance in regards to eligibility, duration and wage replacement levels can reduce poverty, material hardship and psychological distress among the unemployed. Such policies have the ability to moderate harmful consequences of unemployment.

### IN FOCUS | Generous family support policies are predictive of reduced child poverty levels

Our realist review of literature found that generous family support policies (FSP) reduce child poverty because they support and increase the freedom of parents to ensure that their children have access to basic opportunities. Family support policies include the following: job-protected leave, which enables new parents to retain their paid employment status after childbirth (i.e. parents have the legal right to keep their jobs); public childcare, which offers affordable options for parents (i.e. children receive inexpensive or subsidized care during work hours); paid leave, which replaces lost income (i.e. parents receive a benefit sum in proportion to their gross earnings); and cash transfers, which offset the material costs of raising children (i.e. parents receive tax-free family payments or allowances). Moreover, child poverty is lowest when FSP are comprehensive, universal (i.e. available to everyone) and packaged as 'dual-earner policies' (i.e. available for both parents).<sup>5</sup>





Photo: zugzwang (123rf.com)

## Health improves as states increase spending on active labour market policies

**Why is it important?** The primary goal of active labour market policies (ALMPs) is to increase the employment opportunities for job seekers and to improve the matching of jobs and workers. In so doing ALMPs can reduce unemployment and benefit dependency. Combined with passive labour market policies (mainly unemployment insurance), they can also provide workers with significant social protection. There is little evidence regarding the impact of ALMPs on health.

**What we did.** Using a pooled cross-sectional analysis of 20 European nations and 5 welfare regimes, we examined the association between active and passive labour market policy expenditures and self-rated health, adjusting for other individual and macro-level factors.

**What we found.** Increased spending on ALMPs was associated with better self-rated health (particularly among men).<sup>6</sup>

### IN FOCUS | Unemployment, a major cause of chronic illness

Using a multilevel, longitudinal EU-wide analysis, we examined the effects of short-term and long-term unemployment as well as unemployment insurance generosity on health. We found that unemployment insurance system generosity was not associated with health in the total sample. However, the longer individuals were unemployed, the worse their health turned out to be. In particular, almost one-fifth of new onset chronic conditions (18%) were attributable to unemployment patterns, a factor which was also found to be more influential than sex and educational attainment (see FIGURE 3).<sup>7</sup>

FIGURE 3. FACTORS INFLUENCING THE ONSET OF NEW CHRONIC CONDITIONS

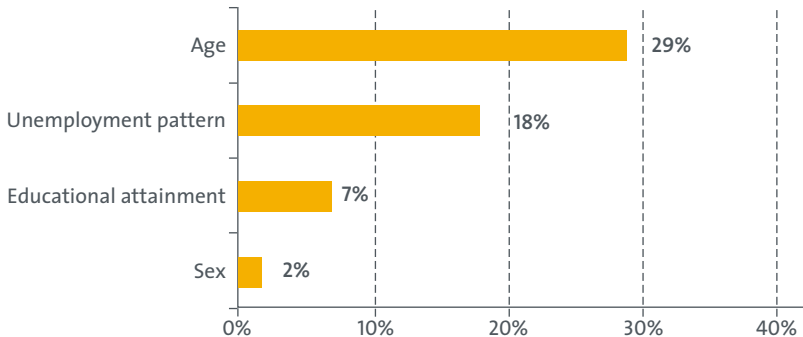




Photo: Matthew Gibson

## Efforts to oppose cuts to social protection are successful when the affected group is politically powerful

**Why is it important?** Social protection policies are critical in providing a safety net for citizens. Nonetheless, during economic crises many countries apply austerity measures in hope of restoring the economy. This threat of cuts to social protection policies can have a damaging effect on the health and well-being of citizens.

**What we did.** To understand why and how policies resist austerity, we conducted a set of theory-driven explanatory case study that involved interviews with academics and civil society members.

**What we found.** We found strong evidence that, during times of austerity, opposition to cuts to fuel poverty programmes and policies is successful when the target group is politically powerful (i.e. electoral power). For example, the Winter Fuel Payment (WFP) in the United Kingdom is the only fuel poverty programme or policy that has been maintained during a time of widespread austerity (after 2010) because the elderly (the target recipients) have high voting turnout, and are a core constituency of the incumbent conservative party. Our research shows that despite the fact that approximately 80% of the elderly who receive the WFP do not actually live in fuel poverty, they all still receive the payment. The conservative-liberal coalition government has maintained the WFP for the elderly, whether they are fuel poor or not, 'because by and large they vote'.<sup>8</sup>

## Policy implications

Health benefits can arise from increases in unemployment insurance generosity, specifically by:

- ensuring that the majority of unemployed individuals receive unemployment benefits;
- ensuring the use of flexible eligibility criteria that take into account different types of work and work situations including: seasonal work, reduced hours and self-employment;
- ensuring an adequate income replacement rate that meets the cost of living for a healthy life;
- ensuring short or no waiting periods between the time of job loss and receipt of unemployment insurance benefits;
- providing unemployment insurance benefits for the whole duration of unemployment.

Policy interventions that maintain employment and rapidly put the unemployed back into the workforce can reduce the burden of chronic conditions in European health care systems.

Increased spending on active labour market policies can result in improved health among the population.

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# High quality employment in a regulated labour market is beneficial to workers' health and reduces inequality

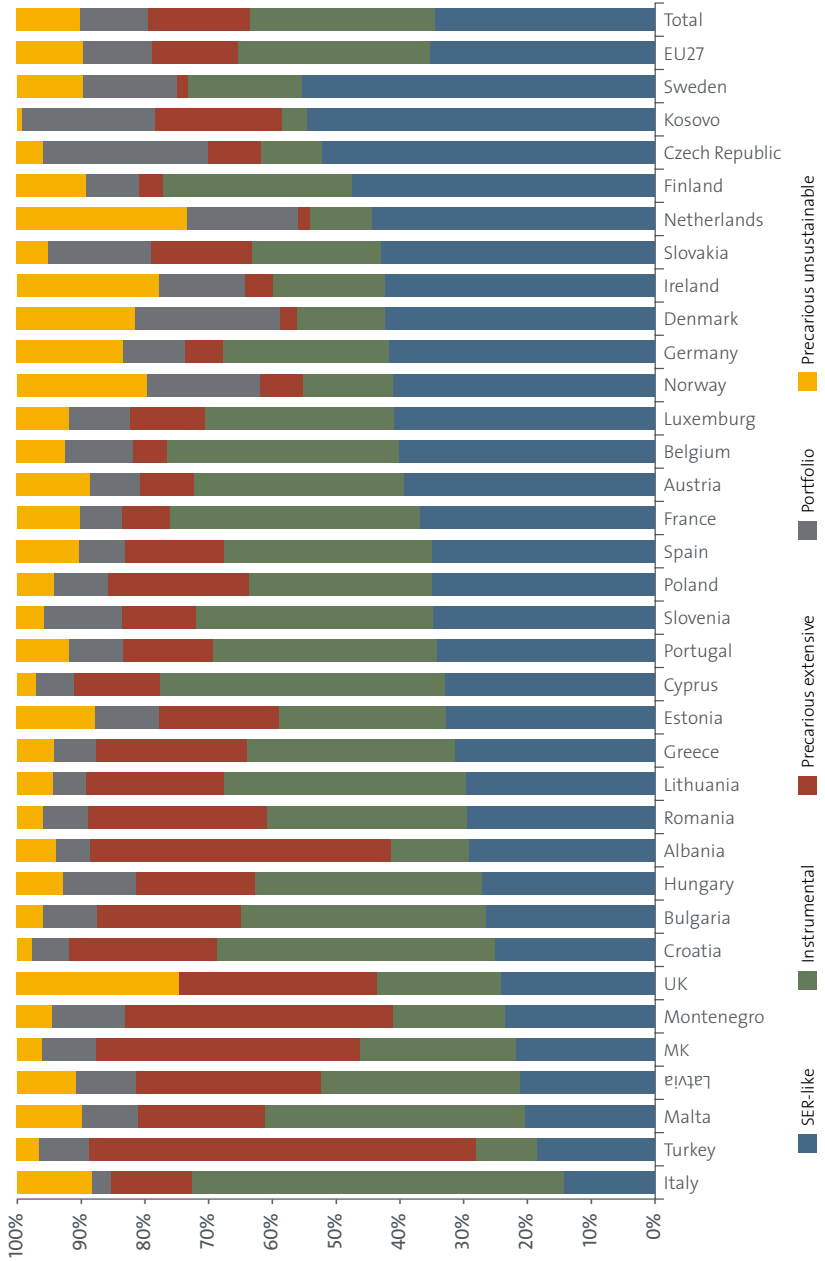
**Surveys are useful for monitoring employment conditions and their impact on work-related health (inequalities), but they must be strongly improved.**

**Why is it important?** In contemporary labour markets, where the old standard of stable, full-time employment is on the decrease, the quality of employment represents a serious threat to workers' health. Low quality and informal employment and the employment precariousness they entail are not very well conceptualised and measured. This situation has led to unsatisfactory estimations of their impact on health.<sup>1</sup>

**What we did.** We defined new multidimensional concepts for measuring employment quality, employment precariousness and informal employment and their health impact in contemporary European labour markets.<sup>2</sup> Based on these concepts, a protocol for determining proxy indicators of employment quality<sup>3</sup> and precarious employment<sup>4,5</sup> was applied to the data from different surveys. We also conducted scoping reviews of informal employment to identify the best definitions and measurements for health inequality studies.<sup>6,7</sup>

**What we found.** Factors which determine the quality of employment in Europe can be summarised in terms of five job types with special attention to their employment quality<sup>3</sup>: SER-like (similar to the standard, idealised employment relationship); Instrumental (relatively stable but with few benefits); Portfolio (highly skilled but rather flexible); Precarious unsustainable (characterised by adverse employment conditions and relationships); and Precarious intensive (shows the most adverse scores, especially in regards to work intensity and high flexibility) (FIGURE 4). Precarious employment is far broader than would be suggested by simple dichotomies between standard and non-standard employment. This employment type constitutes an important social determinant of health in contemporary labour markets.<sup>2</sup> Precarious and informal employment definitions differ across countries.<sup>3,4,6</sup> Precarious employment should be studied using a common definition with a multidimensional perspective;<sup>2</sup> informal employment should be conceptualised and measured with reference to the level of informality<sup>6</sup> and social protection<sup>7</sup>.

**FIGURE 4.** DISTRIBUTION OF PREVALENCE OF JOB TYPES BY COUNTRY IN 2010<sup>11</sup>

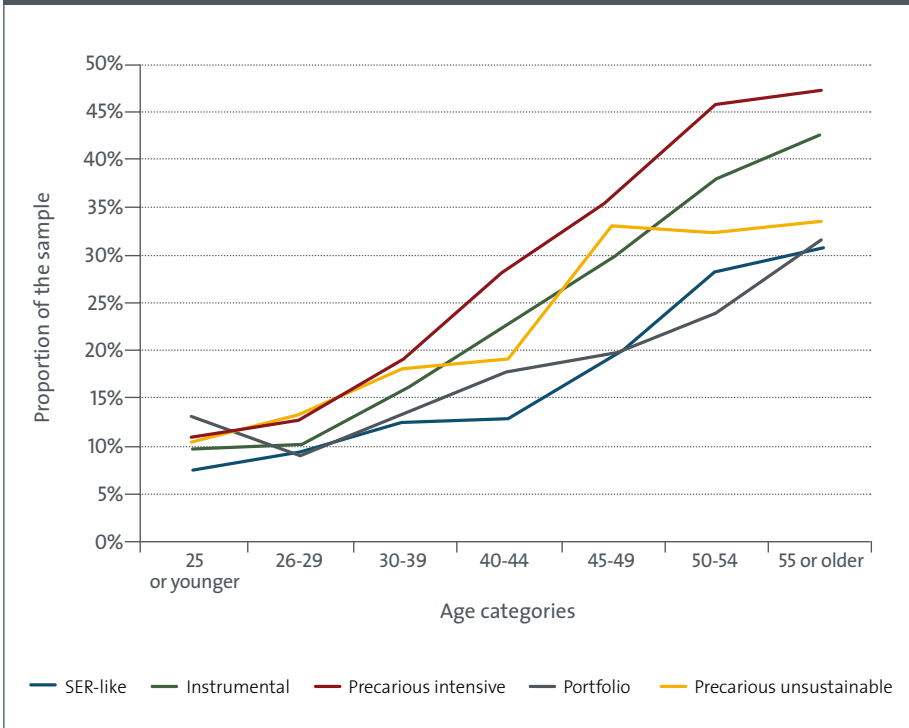


## Employment conditions and quality of employment and their relation to health inequalities differ among and within EU-countries.

**Why is it important?** Working and employment conditions constitute one of the most powerful social determinants of health during adult life. The contemporary world of work entails many old and more recent challenges to health and well-being.

**What we did.** Using different European surveys (European Social Survey (ESS) and European Working Conditions Survey (EWCS)), we analysed the quality of employment and its relation to health.<sup>8,9,10</sup> We also analysed precarious employment and its relation to health using the Employment Precariousness Scale (EPRES) for Spain.<sup>11</sup> Informal employment was analysed using data from EWCS<sup>12</sup>.

**FIGURE 5.** POOR SELF-RATED HEALTH ACCORDING TO AGE AND EMPLOYMENT CLUSTERS



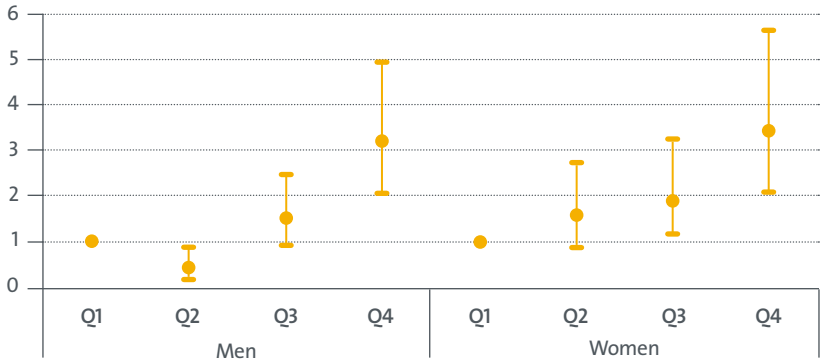


**What we found.** Employment quality clearly varies among EU-countries. High quality employment generally prevails in Nordic countries, while high rates of precarious employment are more common in Southern and Eastern European countries and show a clear relation to self-perceived job satisfaction, general health (FIGURE 5) and mental health<sup>8</sup>. Country differences related to quality of employment also affect class and gender-based socio-economic inequalities in (mental) health<sup>9,10</sup>, making employment quality an important determinant of health inequalities. The prevalence of precarious employment has increased between 2005 and 2010 (48% v 51%), and it is higher among women, manual workers, immigrants and workers with low educational attainment and temporary contracts. Precariousness also impacts mental health<sup>5</sup> (FIGURE 6), even among permanent workers<sup>11</sup>.

### IN FOCUS | Self-employed persons in Sweden

Self-employed persons and their businesses are important to the economy because of their contribution to economic development. However, an understanding of the relationship between psychosocial working conditions, work-life balance and outcomes (such as health and well-being among the self-employed and micro-enterprises) is limited. Data from the European Social Survey show that men and women who are self-employed experience a more adverse work-life balance compared to other groups of employees. Self-employment is positively related to subjective well-being, but differences have been shown among different self-employed groups. Self-employed individuals with employees report a higher level of life satisfaction than the self-employed without employees. The analyses also point to different patterns for female and male self-employment without employees and for immigrant groups compared to natives. Data about Swedish self-employed people also show that all-cause mortality is high in some sectors like Manufacturing and Mining or Trade and Communication during working life and that mortality risks are 8-16% higher among those in a sole-proprietorship, compared to those in a limited partnership<sup>13,14,15</sup>.

**FIGURE 6.** PREVALENCE RATIO OF POOR MENTAL HEALTH ACCORDING TO QUARTILE OF EMPLOYMENT PRECARIOUSNESS. CATALONIA, 2010



### IN FOCUS | Employment precariousness in Catalonia

To study the prevalence of precarious employment in Catalonia (Spain) (as measured using a multidimensional scale) and its association with mental and self-rated health, we identified proxy indicators using data from the II Catalan Working Conditions Survey (2010). We found that the prevalence of precarious employment in Catalonia was high (42.6%), and that it was higher among women (51.4%), youth (86.6%), immigrants (67%), unskilled workers (48%) and less educated workers (51.3%). There was a positive gradient (3 times higher) in the association between precarious employment and poor mental (FIGURE 6) and self-rated health. Our conclusion is that precarious employment is associated with poor health among the working population. Working conditions surveys should include questions on multidimensional precarious employment and health indicators, as it would allow for the monitoring and subsequent analyses of health inequalities.<sup>5</sup>



Photo: Stephen Harlow

## The impact of labour market policies on workers' health

**Why is it important?** Labour legislation plays a critically important role in providing a framework for fair and efficient employment relations that eventually deliver fair and decent employment.

**What we did.** We conducted a realist review of how and why employment protection legislation impacts temporary employment<sup>16</sup> and a systematic review to summarize the scientific evidence about the relationship between part-time employment (PTE), working and employment conditions and health status.<sup>17</sup> We also carried out case studies to analyse specific employment policies and interventions in different countries.<sup>18-22</sup>

**What we found.** Recent policy reforms have generally led to the precarisation of the European labour market resulting in a worsening of working and employment conditions. Employment protection legislation was particularly under attack before the outbreak of the economic and financial crisis and led to worker inequalities and insecurity and also precarious employment.<sup>16</sup> The relationship between PTE, working and employment conditions and health status depends to a considerable degree on welfare state types, gender, PTE measurement and their voluntary or forced nature.<sup>17</sup>

### **IN FOCUS | The Belgian Service Voucher System, health and health inequalities**

We have studied the quality of work in the service voucher system. Our study has shown that policy makers have paid substantial attention to the employment conditions (training, working hours, contract duration) within the system, but that debates on the other characteristics of the quality of work are scarce. While several changes have been made to improve the stability of employment contracts, some employers apply illegal practices to get around regulations. Given the vulnerability of some service voucher employees, more wage transparency and social security payments are needed. This case study has shown that inequalities exist between service voucher employees, related to the Social Paritary committee, between for-profit and not-for-profit organizations, and between native workers and immigrant workers.<sup>18</sup>

### **IN FOCUS | Worker participation in occupational health and preventive action**

Workplace representative participation contributes to the preservation of workers' health. However, some groups of workers may not benefit from their representatives' action owing to their conditions of employment. We analysed the impact of labour market precarisation on the relationship between workers and their representatives in occupational health,<sup>19,20</sup> as well as its consequences on preventive action drawing on data from a Spanish National Working Conditions Survey (2011)<sup>21</sup>. Workers reporting to have representatives were protected by greater preventive action at their workplaces than workers reporting not to have representatives or who were unaware of their existence.

## Policy implications

- The growth of precarious employment must be halted, and jobs should become more secure and of better quality in order to protect the health and well-being of workers and to reduce health inequalities.
- To measure and monitor precarious and informal employment, as well as worker participation in European countries, standardised definitions and indicators as well as improved surveys and information systems have to be developed.
- Issues concerning decent work, fair employment and precarious employment should be fully considered in both national and European public health policies and political initiatives.
- Employment security and the quality of psychosocial working conditions and work-family balance should be improved. This improvement should also apply to self-employment and micro-enterprise situations.

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# Urban planning impacts health



Photo: Fredi Koig

## Social and functional mix, density and accessibility matter when it comes to mortality and mental health

**Why is it important?** People living in urban settings constitute the largest and fastest growing proportion of the European population. Urban planning — of residential areas, public spaces, services and infrastructures — is acknowledged to be an important policy area for the promotion of wellbeing within cities. Nonetheless, its health equity impact has hardly been evaluated.

**What we did.** In a selection of European metropolitan areas we conducted a population-based cohort study comparing the mortality (Torino, Barcelona, Stockholm, Helsinki)<sup>1</sup> and antidepressant drug consumption (Torino)<sup>2</sup> of people living in urban areas who were exposed to a different mix of social or physical characteristics as a result of urban structure. We used data from longitudinal studies combined with census data. Exclusively in the case of Torino, we collected and mapped data on urban transformation over the last 30 years.

Urban planning is the main driver for the differential distribution of services and features within a city: planning decisions are intended to modify the main aspects of the built and social environment, recognized as potential determinants of health impacts according to several reviews of scientific literature.<sup>3,4,5,6</sup> The relative contribution of these determinants of the social and built environment to the trend towards inequality in mortality in an urban setting (Torino) has been estimated compared to the contribution of individual and social determinants.<sup>7,8</sup>

**What we found.** As expected, the individual indicators of social disadvantage show the strongest contribution to inequalities in mortality<sup>8</sup> and mental health<sup>2</sup>, but social deprivation in local neighbourhoods also plays a significant and independent role in the risk of premature mortality<sup>8</sup>.

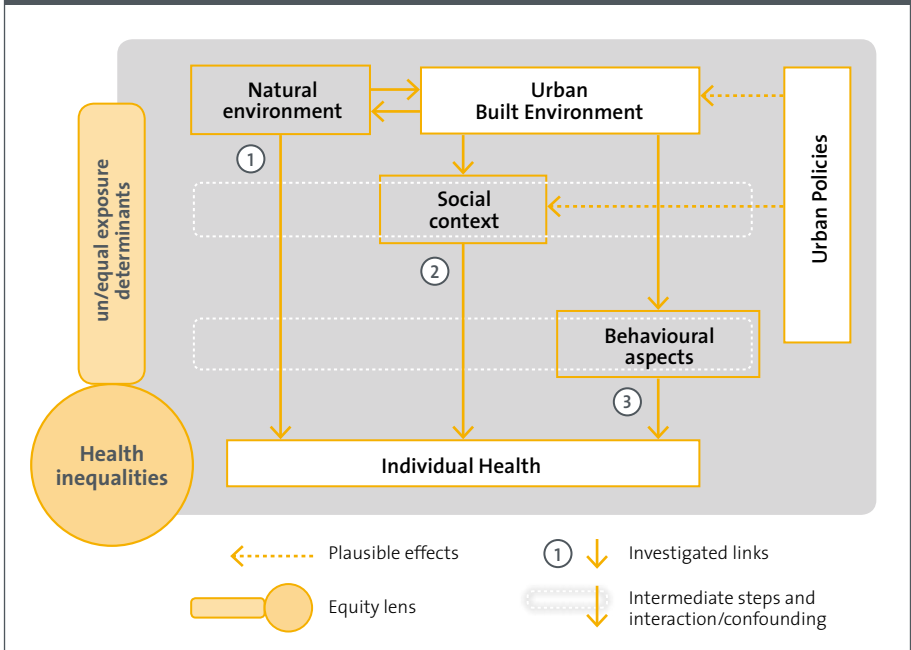


This situation may be due to the segregation of populations with low socio-economic status to disadvantaged neighbourhoods, as an unintended consequence of urban transformations and interventions.<sup>1</sup>

The study in Torino<sup>2</sup> suggests that this effect may be partially due to the built environment itself. Individuals suffering from minor depressive disorders, a health outcome considered to be of short-term impact, seem to benefit from higher levels of urban density and improved access to public transport. Women and the elderly are most likely to be affected by neighbourhood characteristics and hence report more significant related health impacts. However these features of urban structure (accessibility and density) which have a positive effect on mental health are evenly distributed across social groups in cities and do not contribute to health inequalities, at least in the case of Torino.

We found only few studies in Europe that assessed health inequalities linked to built environments. Results of these studies were highly influenced by the local context, making it difficult to generalize conclusions.<sup>5</sup> However local studies remain of prime importance in regards to informing local decision taking based on local evidence.

**FIGURE 7.** CONCEPTUAL FRAMEWORK OF PATHWAYS FROM BUILT ENVIRONMENTS TO HEALTH OUTCOMES.



## Urban renewal: positive impact on self-reported health, no impact on road safety

**Why is it important?** In the most recent decades, urban renewal interventions have been undertaken in most metropolitan areas to improve the built and social environment of the most disadvantaged or neglected industrial areas, and to create new transport facilities and infrastructures. The impacts of such interventions on health and equity are not to be ignored and deserve attention.

**What we did.** In a first case study, we examined the effects of a large scale urban renewal project (*Llei de Barris*), which covered actions on the built and social environment, on self-rated health and health inequalities in Barcelona that had been studied through a quasi-experimental study.<sup>9</sup> In addition to the case study, residents' perceptions on changes in their neighbourhoods were collected via Concept Mapping<sup>10</sup> and by using a theory-driven realist approach to explore the complex causal pathways between urban renewal and health inequality<sup>11</sup>. A second case study addressed the safety impact of an infrastructural intervention: trends in road traffic injuries in the catchment area of the third segment of the new underground line in Torino were compared with a control area in the same city before and after the new line was opened.<sup>12</sup>

**What we found.** In Barcelona, residents perceived that the majority of implemented renewal interventions had positive and important effects on their wellbeing.<sup>10</sup> After renewal, self-rated health improved in the neighbourhoods in which intervention was carried out. Improvements were most noted among the social class of manual labourers, while no changes were observed in the comparison neighbourhoods (FIGURE 8).<sup>9</sup>

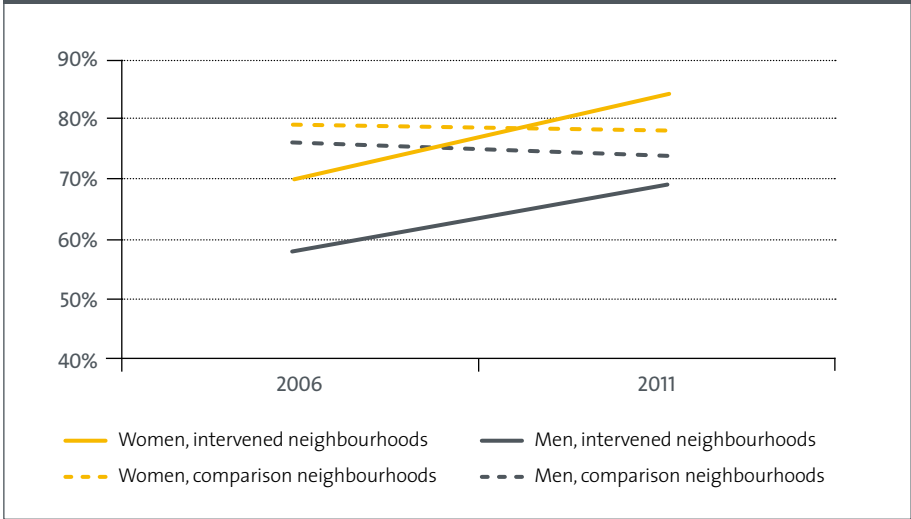
Conversely, in Torino, where we measured registered accidents and not self-reported data, the new metro line project was not associated with significant reductions in the frequency of road injuries in the catchment area.<sup>6</sup> (see box)

Photo: Fredi Roig



Photo: Fredi Roig

**FIGURE 8.** GOOD SELF-RATED HEALTH BEFORE AND AFTER 'LLEI DE BARRIS' IN BARCELONA



**IN FOCUS | Effects of a new metro line in Turin**

We assessed the impacts of the new metro line in Torino: contrary to expectations found in the literature, we found that no appreciable reduction in road traffic injuries took place. In addition, gentrification effects (increase in real estate values, displacement of disadvantaged residents) were not spread along the whole metro line, but concentrated in few areas. The particular urban structure of the area where the metro line is running along the railway line, which also constitutes a barrier towards one side of the city, and the distribution of important facilities as interchange parks, university, shopping mall, is able to strongly interact with the envisaged effects of urban interventions.<sup>6</sup>

This demonstrates the existence of elements more capable of generating impacts at the urban level than efficient underground public transport. The most important finding, however, was that interventions can cause different effects depending on the local context and the characteristics of the area. Urban interventions should therefore be accurately studied, and a case-by-case impact assessment should always be performed.



Photo: Mónica Mestanza

## Urban renewal can stimulate healthy behaviours

**Why is it important?** Healthy behaviours that are usually socially patterned may be influenced by many aspects of the social and built environment. Physical activity in adults is expected to be facilitated by the creation and maintenance of safe environments via urban planning. Likewise, built environments and neighbourhood quality may play an important role in the behaviour of adolescents, particularly in relation to substance and alcohol abuse.

**What we did.** A series of studies in the Netherlands considered to what extent safe neighbourhoods could promote physical activity among the general adult population. A quasi-experimental evaluation of the Dutch District Approach assessed the impact of area-based initiatives on physical activity trends and safety indicators in deprived areas,<sup>13-17</sup> and a companion realist review uncovered how area-based initiatives may stimulate leisure-time walking among adults in deprived areas.<sup>18</sup> Another study focused on the health behaviours of Prague teenagers that are among the main health risk behaviours throughout Europe. It collected data on the characteristics of home and school built environments, neighbourhood quality, and the prevalence of health risk behaviours by means of a survey.<sup>19</sup>

**What we found.** In the Dutch quasi-experiment, safe neighbourhoods promoted walking among the general adult population, especially among those living in deprived areas, primarily by encouraging them to walk in their leisure time. A realist review indicated that urban renewal encourages residents to walk by providing safer, more relaxing, and more convenient environments to walk in. In the Czech cross-sectional study, the health risk behaviours of adolescents seemed to be related not to home neighbourhood environments, but rather to the school environment, particularly in outdoor areas.

## Policy implications

The way cities manage density, accessibility, safety and social mixing makes a difference in the health of residents, with women and the elderly being most affected.

The health of populations in the most deprived areas could benefit from investments in urban regeneration.

Positive outcomes from policies supporting social mixing should not be underestimated, as they depend on the scale of the intervention and on the implementation of complementary measures. Similarly, some expected positive impacts from purely physical and infrastructural policies could be hindered when local urban conditions are not favourable.

Policies aimed at 'equal' access to recreational facilities, markets and other core public services may not suffice. Deprived neighbourhoods may need more tailor-made investments to benefit from the health promoting capacities of urban density, access to public spaces and facilities, and a vital mix of functions.

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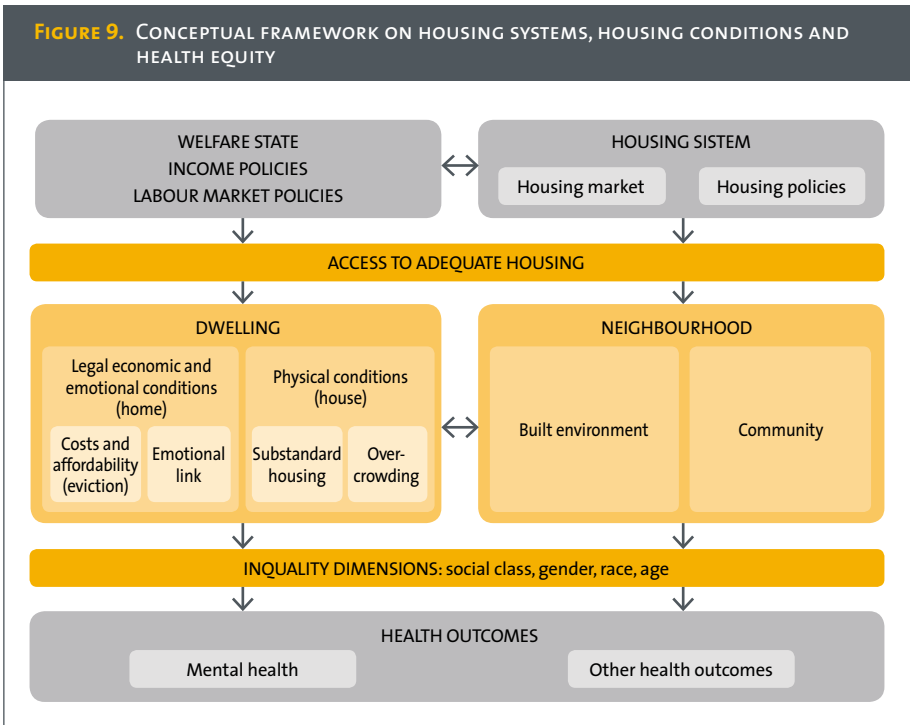
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# Housing policies can reduce health inequalities

## In Europe, housing conditions related to fuel poverty are unevenly distributed and affect health

**Why is it important?** A large body of literature shows the link between inadequate housing conditions and poor physical and mental health. Access to adequate housing conditions is determined by the interaction between the housing system and the welfare state. A country's housing system is in turn the result of the interaction between the housing market and housing policies developed over time (FIGURE 9).<sup>1</sup>





One of the important aspects of housing related to health, mainly during the economic recession, has been the presence of and increase in fuel poverty, defined as having difficulties keeping a house at a comfortable temperature and meeting its energy needs at an affordable cost. Major reviews have compiled abundant evidence on the association between fuel poverty — and related temperature and dampness-related discomfort — and cardiovascular and respiratory diseases, depression, and anxiety. Moreover, a significant percentage of elevated winter mortality may be related to fuel poverty.<sup>2</sup>

**What we did.** Using 2012 European Union Statistics on income and living conditions (EU-SILC), we obtained the prevalence of poor housing conditions related with fuel poverty (dampness, house not adequately warm, arrears on utility bills) and their association with self-rated health, among the population aged 16 or over in the two lower equalised income quintiles. The data were collected from 29 European countries and by the 5 welfare state regimes in which they are classified (social democratic, corporatist, liberal, southern and transition). We also calculated the 2011-12 Excess Winter Deaths Index (EWDI) for these countries.<sup>3</sup>

**What we found.** In all countries, poor housing conditions related to fuel poverty were associated with poor health, even after adjustments for material deprivation were made. These conditions are worse and the EWDI is higher in transition countries and in southern European countries mainly due to the poor quality of the housing stock, rises in fuel prices, and low levels of expenditure on housing items, particularly on instruments such as housing or fuel benefits.<sup>3</sup> Compared to estimations for previous years, the EWDI has worsened in countries most affected by the global financial crisis such as Greece and Spain.<sup>3</sup>

## Housing insulation for fuel-poor households can improve health

**Why is it important?** Energy efficiency interventions such as façade retrofitting can address fuel poverty from structural and long-term perspectives. Despite evidence of the health benefits of insulation, little is known about the political and social contexts contributing to social inequalities in receiving and benefitting from it.<sup>2</sup>

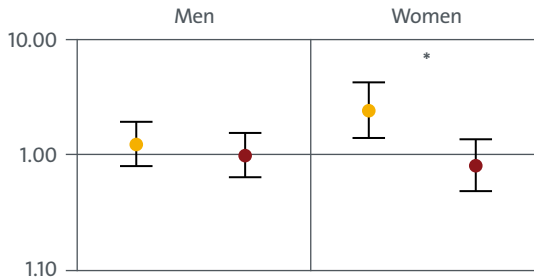
**What we did.** We used a realist review methodology to better understand the mechanisms that explain how and why variations in receiving façade retrofitting interventions and in their impact on health determinants occur across different social groups. We reviewed 124 articles considering four stages of implementation: public policy approach; policy; intervention; and impact on health determinants.<sup>2</sup>

**What we found.** Social groups such as low-income people, renters or elderly people who suffer most from fuel poverty experience more barriers in obtaining a building retrofitting. This is due to factors such as the inability to afford initial costs, a lack of incentives for landlords to improve energy efficiency, or (even in cases of public intervention) insufficient attention to residents' needs or preferences. Energy efficiency policies that do not address these factors may exacerbate these inequalities.<sup>2</sup>

**IN FOCUS | Façade insulation in social housing and cold-related mortality in Barcelona**

The objective of this study was to evaluate the impact on the association between cold outdoor temperatures and mortality of the energy efficiency façade retrofitting of 310 poorly insulated social housing blocks in the city of Barcelona between 1986 and 2012. The design of the study was a time stratified case cross-over analysis. The impacts of the interventions were different for men and women. Although women living in a non-insulated block had a higher risk of death when exposed to extremely cold temperatures on the same day of death and the day before, these associations were not present in cases of women living in an insulated block (FIGURE 10). Associations were stronger in women aged 70-79 with no education. In men, insulation increased the risks of death 14-16 days after an extremely cold temperature day. While façade retrofitting has significantly reduced the risk of cold-related mortality in women, possible negative impacts on men should be studied.<sup>4</sup>

**FIGURE 10.** RELATIVE RISK OF MORTALITY IN EXTREMELY COLD DAYS IN NON-INSULATED (YELLOW) AND INSULATED (RED) SOCIAL HOUSING BLOCKS IN BARCELONA.



\* statistically significant interaction

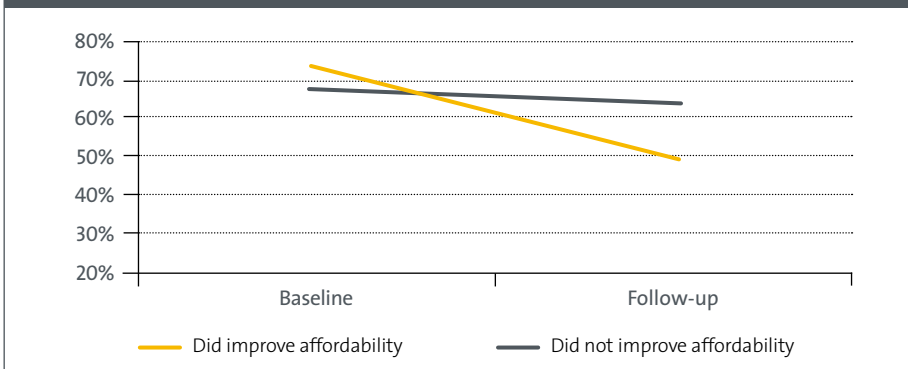
## Access to secure and adequate housing can improve health

**Why is it important?** A common feature of housing systems in Europe is the increase in homeownership in most countries, with rising levels of mortgage debt. In countries like Spain with low levels of social housing, the onset of the financial and economic crisis has worsened problems such as arrears, evictions and substandard housing arrangements and may have had an effect on people's health. Policies to provide affordable housing can improve socioeconomic conditions and in turn health.

**What we did.** In Spain, Caritas is one of the institutions focused on helping people with housing problems. Using a longitudinal study, we aimed to evaluate the effect of relocation to a new house through social programs of Caritas on health determinants and health outcomes in the Barcelona area. The sample consisted of adults from families living in substandard housing who were in need of housing relocation or who were unable to afford their mortgage or rent. They answered a questionnaire interview in 2012 and again one year later.<sup>5,6</sup>

**What we found.** The baseline physical and mental health status of Caritas users with housing problems was much worse than that of the general population.<sup>5</sup> Relocated people experienced substantial improvements in housing habitability and affordability. They also improved in various health indicators, although they did it in the same way as people who had not been relocated, some of whom also had improved their housing and socioeconomic conditions. Mental health improved more in those who experienced relief regarding their precarious socioeconomic situation as well as improvements in housing conditions (FIGURE 11).<sup>6</sup>

**FIGURE 11.** CHANGE IN PREVALENCE OF POOR MENTAL HEALTH IN USERS WITH HOUSING COST >30% OF INCOME AT BASELINE



## IN FOCUS | Foreclosures and health: people affected by mortgage in Catalonia

Since the start of the economic recession, Spain has had very high rates of foreclosures and evictions. Given this situation, organised civil society has produced the Platform for People Affected by Mortgages (PAH in Spanish), one of the most important movements in this area. A self-administered online questionnaire was completed by 905 adults belonging to PAH and living in Catalonia. We found an extremely high prevalence of poor mental health among PAH participants (87%), much higher than the general population of Catalonia (13% in the last health survey). Poor mental health was already significantly higher in the period of non-payment compared with those who were current on payment, while self-rated health status was poorer in later steps of the process such as post-eviction.<sup>7</sup>



Photo: Alice Sassu

## Policy implications

Public policies that tackle housing instability and their consequences are urgently needed in Southern European countries.

Policies on housing energy efficiency can reduce the health consequences of fuel poverty, but need to be free to users, target the most affected groups and be adapted to their needs.

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# Gender equality policies influence gender inequalities in health

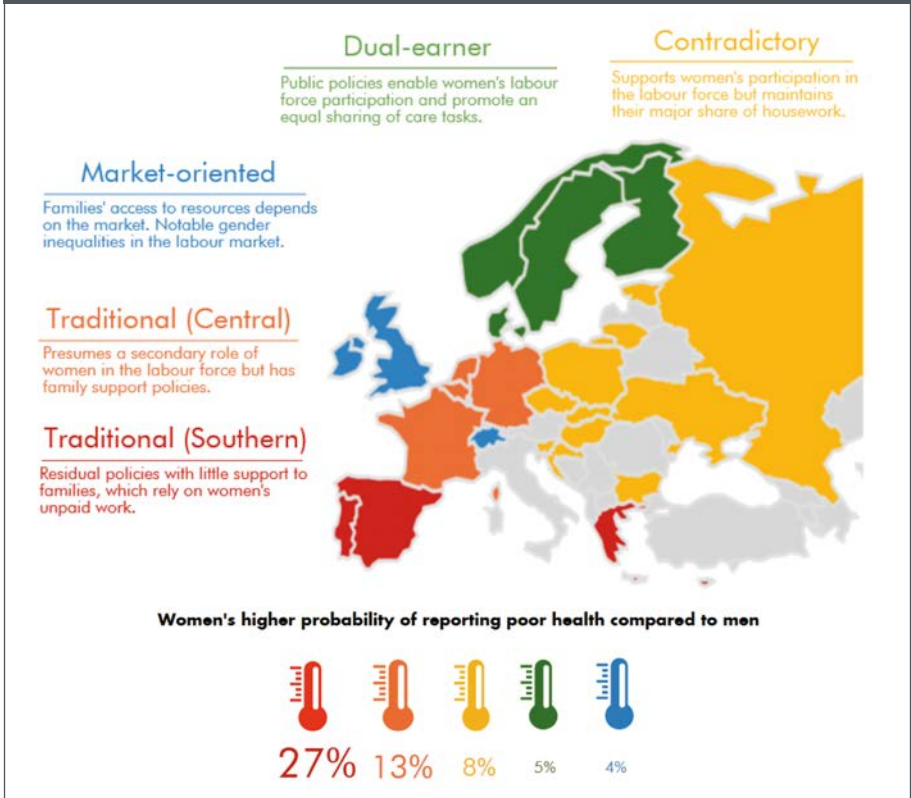
## Gender inequalities in health are larger in countries with policies less oriented towards gender equality

**Why is it important?** In most high-income countries women have poorer health than men in spite of the fact that they live longer. Policies that promote equality between men and women can partly bridge this gender gap.

**What we did.** We performed a systematic review showing initial evidence that policies that promote gender equity, reduce gender inequalities and improve women's health.<sup>1</sup> We then classified European countries according to their family policy model (FIGURE 12) and carried out 3 studies that compared men and women's self-perceived health<sup>2</sup>, the mental health of working men and women<sup>3</sup> and the relationship between employment and family burden and self-rated and mental health<sup>4</sup> in the different family policy models.

**What we found.** In traditional (Southern and Central) and contradictory countries women are more likely to report poorer health than men. This is particularly the case for Southern countries (FIGURE 12).<sup>2</sup> Among wage earners, and across different social classes, gender inequalities in mental health are more widespread and pronounced in market-oriented countries than in countries with other economic systems.<sup>3</sup> The burden of combining employment and family demands seems especially harmful for the self-rated and mental health of women in traditional countries and men in market oriented countries.<sup>4</sup>

**FIGURE 12. GENDER INEQUALITIES IN SELF-RATED HEALTH ACCORDING TO FAMILY POLICY MODEL<sup>1</sup>**



**IN FOCUS | Lone mothers' health in Spain**

Lone mothers are a vulnerable group at greater risk of poverty and unemployment even in rich countries. We analysed two Spanish National Health Surveys, 2003 and 2011, and found that lone mothers presented poorer self-rated health, mental health and health-related behaviours than couple mothers. Manual class lone mothers were particularly disadvantaged. Inequalities between lone and couple mothers did not change along the period. In a country like Spain, where a traditional family model with insufficient family support policies for mothers exists, socio-economic assets are key to determining access to resources producing health inequalities. This could particularly affect Spanish lone mothers.<sup>5</sup>

## IN FOCUS | Parental leave and gendered time use in Sweden and Spain

Time allocation is a highly gendered process, and division of work is an important factor in gender equality. Studies have found that an unequal division of work is related to low levels of well-being, particularly among women. By using Multinational Time Use Study data from Sweden and Spain taken in 1990, 2000 and 2010, we observed that changes in leave policies involving the introduction of or increases in exclusive paternal leave were followed by reductions in time use inequality between mothers and fathers. Our conclusion is that family policies that support gender equality through earning replacement, parental leave for both parents with universal coverage, and working time flexibility to balance family demands contribute to equalising time use between genders.<sup>6</sup>



Photo: Fredrik Roig

## Public services for disabled people can improve the health of family caregivers

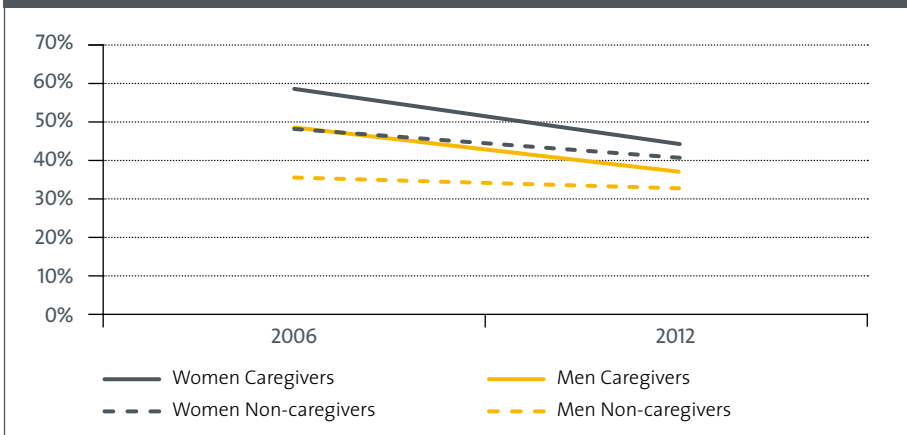
**Why is it important?** The adverse effects of family caregiving on physical and mental health are well documented. In Spain, this burden is concentrated among women, and mostly women of lower socio-economic status. The Dependence Act, passed in 2006, advanced social rights by declaring the universal nature of social services and recognising the subjective right of dependent persons to receive an economic contribution for family caregivers and a number of services at home or in care centres. Implementation of this plan has been limited by budgetary constraints, particularly following austerity cuts in 2012.

**What we did.** Using data from the Spanish National Health Survey 2006 and 2012, we compared the mental health and self-rated general health of the cohabitants of a disabled person who were responsible of their care, and non-caregivers.<sup>7</sup> We used Concept Mapping to gather views of informal caregivers and primary health-care professionals on how the Act had influenced the caregivers' quality of life.<sup>8</sup>



**What we found.** Between 2006 and 2012, the health of family caregivers of both sexes improved more than that of non-caregivers (FIGURE 13).<sup>7</sup> Concept mapping showed that the Act provided caregivers with the possibility of sharing the burden of care and reducing its physical, mental and social consequences while continuing to fulfil their responsibilities to the dependent person. Nonetheless, implementation problems, delays, budget shortfalls and austerity cuts in services and benefits also negatively affected caregivers.<sup>8</sup>

**FIGURE 13** AGE-STANDARDISED PREVALENCES OF POOR SELF-RATED HEALTH BY SEX AND BURDEN OF CARE BEFORE AND AFTER THE ACT.



### IN FOCUS | How to resist austerity: the case of the Gender Budgeting strategy in Andalusia

As a political response to the current economic crisis, significant public policy budget cuts have been implemented while gender equality policies have been downgraded. An example of policy that has resisted austerity is the gender budgetary strategy in Andalusia. To understand why and how, we conducted a theory-driven explanatory case study. We interviewed politicians, feminist academics and civil society members. The main reasons for the resilience of the strategy include a strong political commitment with a solid female leadership supported by the continuity of a Social Democratic government, as well as several mechanisms triggered by the previous context of institutionalisation of the strategy and the facility provided by its low maintenance cost.<sup>9</sup>

## The intersectionality perspective is important in health equity research and policy evaluation

**Why is it important?** Socio-economic position, gender, ethnicity and immigrant background are axes of social inequality that interact among each other in creating health inequalities. Thus the design of policies to tackle health inequalities and their evaluation need to take into account all these dimensions, as well as their intersections.

**What we did.** We have developed a quick guide for incorporating intersectionality in evaluation of policy impacts on health equity, including practical examples based on the experience in the project.<sup>10</sup> Whenever possible, we have stratified our analyses by sex, socio-economic position, immigrant background and/or age.

**What we found.** The impacts of changing contexts and policies differ at the intersection of different axes of inequality. For example, through the economic crisis in Spain, poor mental health increased in middle-aged and manual social class men, but not in other groups,<sup>10</sup> and in immigrant more than native men.<sup>11</sup> Immigrant background and gender intersect and reinforce one another to produce inequalities in the labour market in Europe. These inequalities can affect factors such as the quality of work, health and safety risk or workplace discrimination.<sup>12,13</sup> A qualitative study among domestic workers in the service voucher system in Belgium revealed that immigrant women are particularly vulnerable for poor work quality and work-related health and safety risks. Their negotiation power with clients could be hampered by their limited labour market opportunities or problems related to their residence permit.<sup>14</sup>

## Policy implications

Policies that support women's participation in the labour force and decrease their burden of care, such as increasing public services and support for families and entitlements for fathers, are related to lower levels of gender inequality in terms of health.

Public services and benefits for disabled and dependent people can reduce the burden placed on their family caregivers and hence improve their health.

The intersectionality perspective should be taken into account as a health equity audit in the design and evaluation of policies and reinforced in research on health inequalities.

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# Integration policies matter in terms of immigrants' health

## Immigrants in 'exclusionist' countries suffer poorer health

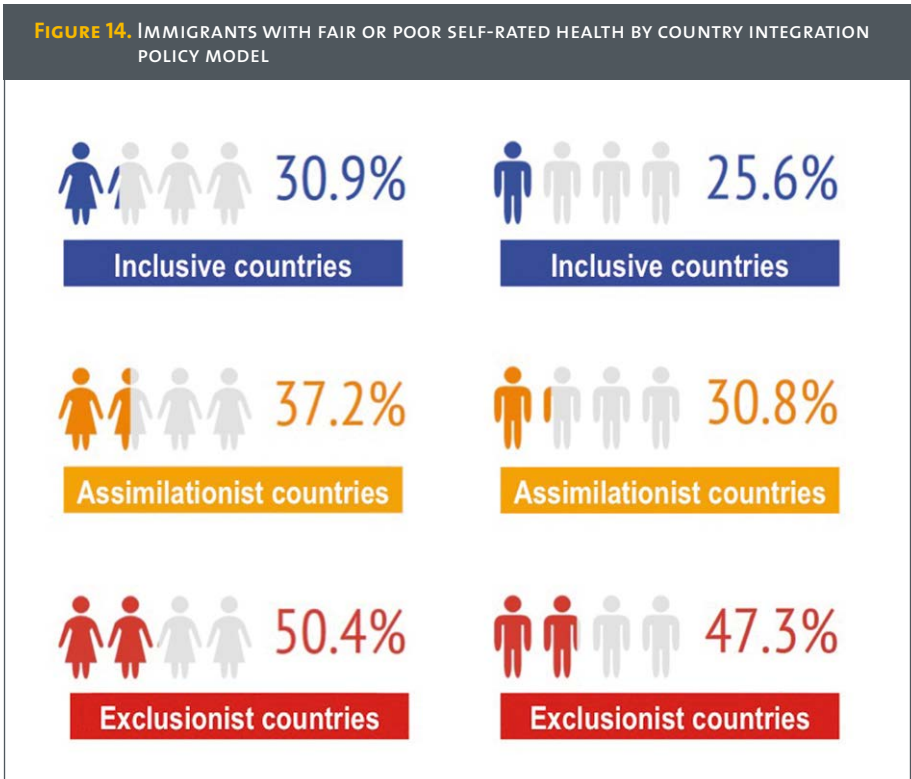
**Why is it important?** Immigrants constitute an increasing proportion of the European population. The debate on policies to control and integrate immigration has been high on the agenda for many years, but very little is known about the health impacts of such policies.

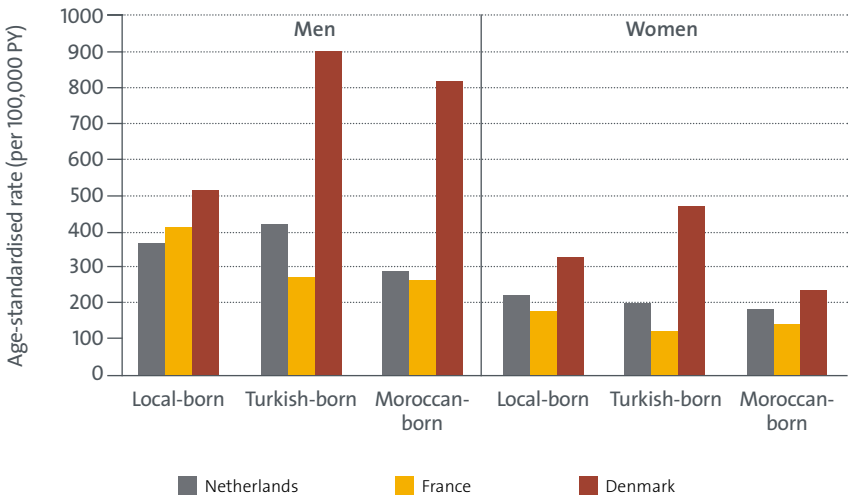
**What we did.** We compared health inequalities between natives and immigrants across European countries that have implemented different integration policy models (FIGURE 14):

- The 'inclusive' model, characterised by easy acquisition of citizenship and tolerance of cultural differences;
- The 'assimilation' model, relatively open in regards to nationality, but restrictive in terms of residence, labour market access and cultural manifestations in public;
- The 'differential exclusionist' or 'guest worker' model, where citizenship is based on ancestry, and that is characterised by low social and political tolerance and relatively inactive integration policies.<sup>1</sup>

We studied self-rated health using survey data from the 2011 European Union Statistics on Income and Living Conditions by comparing individuals born in the same country of residence or outside the EU and who have resided for 10 years or more in the country.<sup>2</sup> We analysed mortality data from the Netherlands (inclusive), France (assimilationist) and Denmark (exclusionist) with comparisons of people born in Turkey or in Morocco (origins well represented in the three countries) with people born in the same country of residence.<sup>3</sup> Using the European Social Survey 2012, we compared depressive symptoms in individuals born in their country of residence or who were born in less economically developed countries.<sup>4</sup>

**What we found.** Inequalities in living conditions and self-rated health among immigrants and natives were highest in exclusionist countries (FIGURE 15).<sup>2</sup> Immigrants also had the highest mortality in Denmark compared to their compatriots in the Netherlands and France (FIGURE 15).<sup>3</sup> Inequalities in depressive symptoms were also largest in exclusionist countries followed by assimilationist countries, and particularly in countries such as Switzerland and Denmark that were poorly ranked in integration policy comparisons.<sup>4</sup>



**FIGURE 15.** MORTALITY RATES BY SEX, COUNTRY OF BIRTH AND COUNTRY OF RESIDENCE

### IN FOCUS | Discrimination and health among persons with immigrant backgrounds in Europe

We used the European Social Survey of 2012 to study the association of perceived membership to a discriminated group and three health indicators among people born abroad or with both parents born abroad (excluding IMF advanced countries), taking into account gender, generation and country integration policy. Perceived membership to a discriminated group was associated with poorer health outcomes, mainly depression, only for first-generation immigrants, and among those, especially in assimilationist countries.<sup>5</sup>

### IN FOCUS | Healthcare exclusion in Czechia

In Czechia, regular immigrants without permanent residence are not entitled to public health insurance and must purchase private insurance. With this system, we found that the real access to health services of these immigrants is much lower than that of Czechs and permanent residents.<sup>6</sup> Even among these permanent immigrants, many lack knowledge of their rights and remain out of the public system.<sup>7</sup>

### Policy implications

Different integration policy models across Europe appear to influence immigrants' health.

Adopting restrictive policies regarding immigrant integration may have health consequences.

Legal barriers in the entitlement to public healthcare systems hinder immigrants' access to necessary care.



Photo: Roberto Brancalini



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# The assessment of the health equity impact of structural policies: an evaluation of research methods

## Evaluating structural policies is a new methodological challenge

The 'inverse evidence law' states that the more a policy could have an impact on population health, the harder it is to convincingly demonstrate this impact. In public health, there is considerable evidence regarding the health impact of interventions aimed at modifying behavioural factors such as smoking and drinking. Much less is known about policies addressing the wider economic, social and physical environments in which people live (called 'structural policies' here), despite the intuition of a much larger impact. The challenge of SOPHIE has been to advance in the generation of such evidence.

Approaches aligned with the principles of evidence-based medicine, including before-and-after measurements and control groups, are sometimes applicable in practice to structural policies, even though the researcher does not hold control over the policy execution. In this, we should recognise that most structural policies are inherently complex. Their population health impact may strongly depend on the ways in which they are implemented, the populations that they target, and the broader context. It then becomes problematic to just summarise the evaluation in terms of a simple 'yes/no effect'. What is needed are alternative designs capable of generating more nuanced insights from which careful lessons that may be transferable to other populations can be drawn.

## Mixed methods are essential to the evaluation of structural policies

In the SOPHIE project, various approaches were used to assess and understand the impact of structural policies on population health and on health inequalities. It was found that a combination of quantitative and qualitative or realist approaches was essential to fully assess the impact of structural policies. Mixed methods yielded evidence that was strong, rich and relevant.



Quantitative approaches were applied mostly with the aim of assessing *whether* a structural policy has had a demonstrable impact on health-related outcomes, *how large* this effect appeared to be, and whether this impact differed in accordance with socioeconomic status. Some studies made comparisons between places, such as countries, regions, or small districts and found associations between variations in structural policies and variations in health outcomes. Other studies made comparisons over time, including those before and after the introduction of new policy measures. In time series analyses, more detailed data on trends over time were used to assess whether the introduction of a policy was followed – immediately or gradually – by a change in health outcomes. Finally, some studies applied ‘quasi-experimental’ approaches that combined geographical and time aspects. One way of doing this was to apply the before-after design to both the population exposed to the intervention and to a control population (e.g. those living in another neighbourhood).

In addition to these quantitative approaches, the SOPHIE project applied in-depth analyses that included qualitative research methods in order to identify the mechanisms through which a structural policy could influence population health. Several methods have been used, including concept mapping and multiple case studies. In particular, we explored the feasibility and informative value of ‘realist’ approaches, including realist reviews and realist evaluations. These approaches were particularly aimed at testing expectations regarding how a structural policy could affect population health, and under which conditions (i.e. *when/where*) the same policy would set specific mechanisms in motion.

## Quantitative comparative approaches yields new findings

Most studies performing quantitative comparisons over time and/or from different places yielded novel evidence on the impact of structural policies on the health of disadvantaged groups such as manual workers, women or ethnic minorities. Some common challenges had to be addressed. In the SOPHIE project, much experience was gained from cross-national comparisons. It was found that the strength of evidence was dependent on various conditions.

1. The study had to be able to control for confounding national factors such as measures of national income. A particular challenge may be to control for other policies that were developed in parallel with the structural policies of interest.
2. The study had to maximise the number of countries studied, which in the case of Europe is less than 30. In particular, the study had to find ways to apply statistical controls to several confounders even with such a limited number of countries (e.g. multi-level analysis with controls for individual-level confounders).
3. Problems in the comparability of the information on the structural policies of interest may induce systematic or random measurement bias and affect study outcomes. While using comparable though simplistic indicators may be a solution, it may also cause problems of measurement validity.

Many SOPHIE studies found ways to address these challenges in their particular case, depending on the topic of interest and the data that were available.

The application of time trend analysis, rather than cross-sectional comparisons, yielded stronger evidence on the impact of structural policies. The experience of SOPHIE studies is that stronger evidence could be obtained if:

1. The structural policies of interest rapidly changed over time. Sudden policy changes generate 'natural policy experiments' that can be assessed in a quasi-experimental design. In contrast, policy changes that are gradually implemented (e.g. over a period of 5 to 10 years) are generally harder to evaluate in terms of their population health impact.
2. The available data sources are continuous (e.g. monthly, yearly or every two years) instead of covering only a few points in time. Continuous time series increase the possibility to accurately follow trends in health-related outcomes after a policy change, and thus to assess delayed dose-response relationships.

3. No major developments occur in other fields. Confounding may occur due to concurring changes in other policy areas. Such problems can be solved with multi-country studies that compare ‘experiment’ to ‘control’ countries which differ particularly with regards to the policy of interest.

## **Realist approaches help to address new and vital questions**

When applied in isolation, quantitative approaches may result in simple ‘yes/no’ verdicts regarding the impact of structural policies on health inequalities. ‘Realist’ approaches have been used in the project to address how questions, allowing SOPHIE researchers to disentangle the mechanisms by which structural policies could affect the health of people. By doing this, we were able to formulate policy conclusions that were more nuanced and aligned with the reality of people’s lives. Such detailed knowledge could also help us to formulate lessons that take into account the context, i.e. knowing under which conditions a structural policy would have the promised impact.

According to the experience of SOPHIE researchers, several challenges have to be faced in order to fully seize the potential of realist approaches:

1. The strength of the evidence strongly depends on the quality and richness of the information that could be obtained from primary sources or published studies. For example, in a field dominated by quantitative studies, there may be little qualitative information on the mechanisms of interest, and a ‘realist’ synthesis may not have sufficient material to test and refine initial expectations.
2. A clear and efficient working protocol must be developed. Published studies using ‘realist’ approaches greatly varied in the ways in which the studies are executed and results are presented. Further standardisation (see e.g. [www.ramesesproject.org](http://www.ramesesproject.org)) is expected to increase the efficiency, quality and transparency of each individual study.
3. On another level, scientists using ‘realist’ approaches should find ways to deal with the current publication pressure, as these methods can be more time-consuming than quantitative studies and harder to get into most high-impact scientific journals. In similar ways, because of the lack of simple answers, it may be more difficult to disseminate the results to policy-makers or professionals, especially those trained only in positivist, quantitative science.

However, ‘realist’ approaches are an indispensable complement to ‘black box’ studies that only aim to demonstrate and quantify the impact of a structural policy. These approaches need to be further developed, applied and promoted in public health.

## Implications for policy-oriented research

In future work, stronger evidence on the health equity impact of structural policies could be obtained by further application of the quasi-experimental design, i.e. a pre-post, intervention-control design. As a general rule, the strength of evidence increases with (1) a larger number of control and interventions areas; (2) a more detailed measurement of intervention exposure and of confounders; and (3) the inclusion of more subsequent years of observation.

Qualitative or ‘realist’ approaches are indispensable to gaining an understanding and predicting the impact of structural policies. They can best applied together with a primary, prospective collection of data, such that expectations regarding ‘mechanisms of change’ can be assessed with rigour and detail. Moreover, in an ideal situation, these approaches would be complemented by quantitative comparative approaches that aim to test and quantify the expected health impacts, to simultaneously assess ‘whether, how much’ and ‘how, when’ a structural policy would reduce inequalities in health.

Broad structural policies and ‘regimes’ may be most relevant for the reduction of health inequalities. However, they may be hard to assess in terms of their precise impact, while the variety of mechanisms and context-dependencies may be overwhelming. While specific structural policies of interest may be assessed with greater detail and rigour, the demonstrated impact may turn out to be deceptively small as compared to the current magnitude of health inequalities. Further research will have to find a balance each time between the brush and the tweezers.

In the SOPHIE project, we learned that the key challenge is to get stronger evidence regarding the impact of such policies on people’s health. If such an impact could be assessed for a population at large, it is also possible in principle to assess this impact for subpopulations stratified by socioeconomic status or other measures of inequality, provided that the available data produce sufficient statistical results.

Novel statistical approaches such as Propensity Score Matching and Difference-in-Difference methods did not appear to offer a satisfactory solution to the key challenges. The key issue was often related to observation and measurement. In SOPHIE, most comparative studies would not have been possible without the many European-wide surveys that were initiated in the last 10 to 15 years. We strongly recommend further development of these international surveys over the coming decade.



# Maximising the social impact of health equity research

## Community and civil society participation, a costly but worthwhile process

**Why is it important?** Stakeholder involvement in research projects plays a key role in ensuring that project results are put to use to tackle the problem of health inequalities. This involvement may also contribute to the creation of a bridge between stakeholders' needs and research outputs, hopefully leading to more socially relevant research. However, only few projects and studies make efforts to engage with non-academic stakeholders. Socially disadvantaged groups may be especially hard to reach when traditional research methods are used, resulting in under-researched topics and/or data and conclusions of questionable validity.

**What we did.** Focusing on community-based participatory research (CBPR), one of the most promoted approaches to involving affected communities at all stages of research, we performed a scoping review of 38 full-text articles on CBPR studies on the topic of ethnic minorities and migrants. The aim was to systematise the current operationalisation of the CBPR concept by researchers, especially in terms of its expected causal roles.<sup>1</sup>

In regards to knowledge transfer, we also conducted an applied ethnography (detailed case study) within the largest state-backed health equity project of its kind focused on segregated Roma communities called Healthy Communities.<sup>2</sup>

To move from theory to practice, we also drew lessons from different degrees of community partnership present in the project, including the participation of Caritas Barcelona in the SOPHIE consortium and in housing research studies. We prepared a report on the experiences derived from the involvement of different stakeholders in the research process.<sup>3</sup>

**What we found.** In the scoping review, we found that CBPR has been used minimally by researchers for research on migrants and ethnic minorities in Europe and that outside Europe its expected causal roles are being operationalised by researchers in a rather unsystematic manner. Based on overlapping researcher impressions,

however, several causal mechanisms can be postulated through which particular CBPR features, e.g. sensitive pre-assessment of cultural and social norms, seem to facilitate the involvement of communities in research on migrant and ethnic minority health.<sup>1</sup>

The results of a case study of Healthy Communities showed that the community participation concept was not translated into the organisational level as intended within the expert discourses. Despite this conceptual weakness, the project appeared to be successful in fostering intended changes in the target population's health-related circumstances, thanks precisely to its participative features (see box).<sup>2</sup> Participatory data collection methods gather important perspectives that enrich the evaluation of the impact of social policies. Several barriers can be found in the recruitment of vulnerable groups affected by the policy, from time constraints to negativism, mistrust or overburden, but their experiences have made the effort worthwhile. Frontline professionals working with them may be a complementary source of information and can help to reach them.<sup>3</sup>

### **IN FOCUS | Mediating health for segregated Roma in Slovakia: An ethnographic case study<sup>2</sup>**

Health-mediation programs represent pivotal state-backed health-equity policies addressing the needs of segregated Roma communities in Central and Eastern Europe. The Slovak Healthy Communities (HC) program — which has been operational for over 10 years mostly employing segregated Roma and is now serving around 200 communities nationwide under the direct supervision of the Ministry of Health — is among the most advanced of these initiatives.

In our applied ethnographic study of the HC program we relied on analyses of documentation, long-term participant observations, and semi-structured interviewing across all organisational levels of the program. We found the program to be rather out-dated and conceptually flat: while it set out to emphasise the targeted population's health-related behaviour and responsibility and to intervene, this was to be done through edification and temporary assistance with healthcare access. Nevertheless, thanks to an implicit standard of pragmatic flexibility and personal commitment to empathy, the actual fieldwork exhibited unprecedented positive impacts. Many field coordinators were also encouraged and capable of negotiating improvements in local basic infrastructure and effectively increased local bridging social capital. Moreover, with their stories of personal success congruent with local cultural standards and immediate capacities, many field assistants seemed to inspire other community members as particularly realistic and appealing role models.

Involvement in partnered research of social organisations like Caritas requires a mutual understanding and constant dialogue with academic groups, and a balance between research needs (its priority mission of social care) and the avoidance of false expectations among participating users. Nevertheless, the voice of these organisations is highly valued by society and can maximise the impact of research.<sup>2</sup> (see box)

### IN FOCUS | Partnered research on housing and health

Partnership of Caritas Barcelona led to the design of a study of users in vulnerable housing situations. The baseline survey was featured in a Caritas report. The reputation of Caritas was key to bringing the study to the front page of most local newspapers (top photo: press conference).<sup>5</sup>



Similarly, the report with results of the online survey of participants in the Mortgage Affected Platform was launched on the eve of the admission to the regional parliament of a citizens' petition on housing policies. The following day, the Platform handed the report to all parties in the parliament and secured their written commitment to the approval calendar (bottom photo).



## Social media are good channels for broadening the reach of politically relevant research

**Why is it important?** Research is often being performed by institutions and in ways that are detached from policymakers and the civil society, resulting in research results with low practical value. In relation to research on health equity and social determinants of health, on top of the usual lack of linkage between executives and academics, additional inter-sector barriers exist. However, the social relevance of this research is also an opportunity and can raise the interest of multiple sectors.

**What we did.** We engaged in a variety of channels to disseminate the project's results in formats apart from the standard scientific articles and conferences. These included websites, social media sites, videos, press releases, public seminars and direct contact with stakeholders.

**What we found.** Active knowledge transfer requires time and resources but gives important returns in terms of impact on different professional sectors, public opinion and policy. Moving from least to most complex, Slideshare is a very simple platform for making the work that researchers present in seminars and conferences publically available. High-quality videos can be quite effective but their preparation can be especially time-consuming. Other intermediate options include an updated and well-organised website, an active Twitter account covering not only project achievements and new resources available but also related content, press releases, policy briefs or infographics of selected studies. The use of local languages in addition to English for locally relevant content is also important in terms of disseminating research findings to a broader public. Finally, personal contacts facilitate access to politicians, who can nevertheless become familiar with policy-relevant findings through traditional mass media or Twitter.

### IN FOCUS | From the video to politics

In May 2014 we launched a video showing the health equity benefits of a urban renewal plan implemented in Catalonia in the past decade.<sup>6</sup> This video made its way to a journalist, who wrote an article for a major newspaper on the study. Politicians from the former government that launched the plan shared the article widely in social networks, and in several subsequent media appearances the 'health benefits argument' was used to defend the plan and its government legacy. A reintroduction of the plan is now on the agenda of the newly elected municipal progressive coalition in Barcelona.



SOPHIE 'Urban renewal and health' video presented at the European Public Health Conference plenary.

## Policy and research implications

The participation of affected populations and frontline professionals adds value to policy evaluations and research.

Face-to-face contact, respect and gaining trust are key for the effective involvement of stakeholders in research and in the use of findings.

Researchers should make efforts to actively disseminate their work and knowledge on social and political determinants of health and also contribute to the funding of agencies through emerging social channels. Research institutions should back these efforts.

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