



SOPHIE: Evaluating the impact of structural policies on health inequalities and their social determinants and fostering change

Incorporating Intersectionality in Evaluation of Policy Impacts on Health Equity

A quick guide

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About this guide

Why this guide and what is it about?

Socio-economic position (including indicators of social stratification and social class) is the most studied form of social inequality when describing health inequalities and analysing policies to tackle them (CSDH, 2008). However, there are other social relations that generate health inequalities such as, for example, gender, ethnicity or migration status (Solar & Irwin 2007). These axes, or dimensions of social inequality, can be seen as intertwined power relations interacting among each other in creating health inequalities.

Therefore, not only research on health inequalities but also the design of policies and the study of the impact of a policy on health equity needs to take into consideration all these dimensions, as well as their intersections (Schulz & Mullings 2006). This guide aims to raise this issue, by introducing central concepts of intersectionality theory and questions to consider in an intersectionality-based policy analyses and by showing examples of how one-dimensional analyses of population health and health inequalities can mask evidence of true health effects.

Who is this guide for?

This guide is originally intended for the researchers of the European project SOPHIE (Evaluating the Impact of Structural Policies on Health Inequalities and their Social Determinants, and Fostering Change) as a way to introduce them to intersectionality theory and to promote the use of the intersection approach in their analyses of structural policies related to health inequalities. However, it will be useful to all people engaged in research on social inequalities in health, and for those evaluating policy impacts on such inequalities. This is exactly the kind of research we are performing in the collaborative European project SOPHIE.

Intersectionality theory: the concept

Intersectionality theory, inspired by the feminist and antiracist traditions, demands that inequalities by race, gender, class and sexuality be considered in tandem rather than distinctly. Intersections between axes are thought to create complex social locations that are more central to the nature of social experiences than are any of the axes of inequality considered singly (Veenstra 2011). Focusing on single markers leads to a false classification of people: groups in society are affected by their position in multiple systems of power and oppression, a “matrix of domination” that changes over time and place and in different institutional domains (Hankivsky & Cormier 2011).

Intersectionality has not a predetermined or pre-hierarchical pattern between categories. It is not an additive approach, but instead strives to understand what is created and experienced at the intersection of two or more axes of oppression (Hankivsky et al. 2010). It considers the impact of systems and processes of oppression and domination, being attentive to time, place, and historical specificity.

Intersectionality and public policy

The goal of intersectionality policy analysis should be to identify and address the way specific acts and policies address the inequalities experienced by various social groups, taking into account that social identities such as race, class, gender, ability, geography, and age interact to form unique meanings and complex experiences within and between groups in society. It shares similarities with other critical frames that have revealed that policy is not neutral as it is not experienced in the same way by all populations. However, it states that people's lives, their experiences, and positions in relation to policy are created by intersecting social locations. Therefore, targeted policies can be often as ineffective as general policies in that both fail to address multiple identities and within-group diversity (Hankivsky & Cormier 2011). Intersectionality warns us of the risks of policies that, by privileging the treatment of some inequities and ignoring the fact that inequalities are often mutually constitutive, end up marginalizing some people, reproducing power mechanisms among groups, and failing to address the creation of categories that are at the root of the constitution of inequities (Hankivsky 2012a).

Efforts to move beyond "one-dimensional" and "additive" policy analyses have included equality mainstreaming, diversity mainstreaming, intersectional feminist frameworks, intersectional public policy analysis, and multistrand mainstreaming. These approaches share the logic that meaningful attention to diversity changes the policy questions that are asked, the kind of data that are collected, how data are collected, and how data are disaggregated. Little work has been done to determine whether all possible intersections might be relevant at all times, or when some of them might be most salient (Hankivsky & Cormier 2011).

The development of an intersectionality policy analysis is still undertheorized, and methods for integrating intersectionality into policy development, implementation, and evaluation are in their very early stages of development (Hankivsky & Cormier 2011).

Intersectionality-Based Policy Analysis (IBPA)

Intersectionality-Based Policy Analysis (IBPA) provides a new and effective method for understanding the varied equity-relevant implications of policy and for promoting equity-based improvements and social justice within increasingly diverse and complex populations (Hankivsky 2012a). IBPA is intended to improve current tools for evaluating the differential effects of policy on populations, in particular health impact assessments (HIA), which seek to tackle health inequities when making health and health-related decisions at the level of policy and programming. IBPA is founded on what HIAs commonly overlook: reflexivity; relationality; processes shaping power differentiation within and among populations; and accounting for resistance and resilience.

The IBPA Framework developed by Hankivsky et al. (2012a) has two core components: a set of guiding principles, and a list of 12 overarching questions to help guide/frame/shape the analysis which are developed in the following sections.

Guiding principles when performing an IBPA

When performing an IBPA there are certain principles that one has to keep in mind during the entire research process. These aspects are summarised as follows:

-Social categories interact with and co-constitute one another to create unique social locations that vary according to time and place, namely, **intersecting categories**.

-There exist **multiple levels** in society and intersectionality aims to understand the effects between and across the various levels, including macro (global and national-level institutions and policies), meso or intermediate (provincial and regional-level institutions and policies) and micro levels (community-level, grassroots institutions and policies as well as the individual or 'self').

-**Power** is a central concept in intersectionality. The focus is not just on domination or marginalization, but on the intersecting processes, by which power and inequity are produced, reproduced and actively resisted.

-**Reflexivity** recognises multiple truths and a diversity of perspectives, while privileging those voices typically excluded from policy 'expert' roles.

-Privileges and disadvantages, including intersecting identities and the processes that determine their value, change over **time and place**.

-Power has also a role in knowledge production. Intersectionality analysis expands understandings of what is typically constituted as "evidence" by recognizing a **diversity of knowledge**, paradigms and theoretical perspectives that can be included in policy analysis.

-Intersectionality places an emphasis on **social justice**.

-**Equity** is concerned with fairness. Inequities exist where differences in outcomes of interest are unfair or unjust. The intersectional lenses mean looking not only at gender equity, but also at the impacts of the intersections of multiple positions of privilege and oppression.

IBPA questions

The checklist of questions to be answered in order to perform an intersectionality-informed policy analysis and included in the IBPA framework is shown next. As explained by the authors the framework has been designed in order to be flexible, therefore some users may focus on certain questions, tailoring them to specific policy contexts. In the context of evaluating the impact of structural policies on health inequalities, we would advise our partners to go through all the questions but to focus on 1,2,5,6,9, and 11.

Descriptive

1. What knowledge, values and experiences do you bring to this area of policy analysis?

- What is your experience with policy and policy analysis? What type of policy areas have you worked in?
- What are your personal values, experiences, interests, beliefs and political commitments?
- How do these personal experiences relate to social and structural locations and processes (e.g., gender, 'race' and ethnicity, socio-economic status, sexuality, gender expression and age; patriarchy, colonialism, capitalism, racism and heterosexism) in this policy area?

2. What is the policy 'problem' under consideration?

- What assumptions (e.g., beliefs about what causes the problem and which population(s) is/are most affected) underlie this representation of the 'problem'?

3. How have representations of the 'problem' come about?

- What was the process in framing the 'problem' this way?
- Who was involved and why was the 'problem' defined in this way?

- What types of evidence were used?
 - How has the framing of the 'problem' changed over time (e.g., historically) or across different places (e.g., geographically)?
4. How are groups differentially affected by this representation of the 'problem'?
- Who is considered the most advantaged and who is the least advantaged within this representation? Why and how?
 - How do the current representations shape understandings of different groups of people?
 - What differences, variations and similarities are considered to exist between and among relevant groups?
5. What are the current policy responses to the 'problem'?
- Who has responded to the 'problem' and how? For example, how have governments and affected populations and communities responded to the framing of the 'problem'?
 - What are the current policy responses trying to achieve?
 - Do current policies focus on target groups? If so, are they seen as homogenous or heterogeneous? Are they stigmatized by existing policy responses?
 - How do existing policies address, maintain or create inequities between different groups?
 - Do existing responses create competition for resources and political attention among differently situated groups?
 - What levels or combination of levels of analysis exist (e.g., micro, meso, macro) in relation to the policy 'problem'?

Transformative

6. What inequities actually exist in relation to the problem?
- Which are the important intersecting social locations and systems? For example, how do 'race', ethnicity, class, sexuality and other social locations and systems of inequality (racism, colonialism, classism, heterosexism) interact in relation to this policy problem?
 - Where will you look to find necessary information to help you answer this question (e.g., evidence from academic sources, grey literature and policy reports focusing on intersectionality-informed analyses)?
 - What potential approaches can be used to promote discussion of the problem across differently affected groups (e.g., Parken's (2010) Multi-Strand Method, which lays out a process for understanding intersecting inequities in the evidence gathering phase of policy)?
 - What are the knowledge/evidence gaps about this problem across the diversity of the population?
7. Where and how can interventions be made to improve the problem?
- What are the logical entry points? What are the available policy levers (e.g., research/data, political champions/allies, laws/regulations/conventions, resources)?
 - What are other examples of successes? How could policy interventions build on these examples?
 - Who is part of the proposed intervention? Who is positioned to influence and implement the intervention?
 - What role can diverse communities play in these interventions? How will they be meaningfully engaged and supported in providing input?
 - At what level or combination of levels (e.g., micro, meso, macro) can interventions be made?
8. What are feasible short, medium and long-term solutions?

- How can solutions be pragmatically positioned and promoted in relation to government policy priorities (e.g., budget allocations, ministerial priorities and departmental plans)?
- How can proposed solutions be synthesized into a clear and persuasive message?

9. How will proposed policy responses reduce inequities?

- How will proposed options address intersectional inequities and promote social justice? How will you ensure that the proposed options do not reinforce existing stereotypes and biases or produce further inequities for some populations?
- How will the solutions interact with other existing policies?
- What might be the challenges and opportunities for proposed policy solutions?

10. How will implementation and uptake be assured?

- Who will be responsible (and who is best positioned) to ensure the implementation of the policy recommendations?
- What time frames and accountability mechanisms are identified for implementation?
- How do the policy solutions encourage solidarity and coalition building across divergent interests and groups?

11. How will you know if inequities have been reduced?

- How will you measure policy implementation and outcomes?
- What intersectional factors will be measured in the evaluation process? How will they be measured?
- How will affected communities be meaningfully engaged in assessing the reduction of inequities?
- What will be the measure of success?

12. How has the process of engaging in an intersectionality- based policy analysis transformed the following:

- Your thinking about relations and structures of power and inequity?
- The ways in which you and others engage in the work of policy development, implementation and evaluation?
- Broader conceptualizations, relations and effects of power asymmetry in the everyday world?

Intersectionality and health research

Intersections in health inequalities remain underexplored, despite the immense popularity of intersectionality theory in humanities and social sciences and the growing body of both qualitative and quantitative intersectionality research (Schulz & Mullings 2006; Veenstra 2011). Intersectionality is being recognized as a valuable normative and research paradigm for furthering understandings of the complexity of health inequities (Cummings & Braboy Jackson 2008; Iyer et al. 2008; Hankivsky et al. 2010; Hankivsky 2012b).

However, the development of research designs and methods that capture effectively all of the tenets of intersectionality theory remains underexplored. Quantitative researchers have acknowledged the tensions between conventional research designs, intended to test for independent effects, and intersectionality principles. This has not impeded the emergence of intersectionality-informed quantitative studies that utilize techniques to examine significant interactions between social determinants which constitute health (Sen et al. 2009; Veenstra 2011; Malmusi et al. 2010). Thus, interaction could be seen as the statistical way of looking at the relevance of an intersection. Moreover, there is a growing body of literature that provides normative and operational guidance for the application of intersectionality in qualitative and quantitative health research and policy (Hankivsky 2012b). Intersectionality scholars also emphasize that to address the whole of a complex problem no individual study but programs of research including different studies which sequentially build upon one another should be developed.

Intersectionality-informed quantitative research

One of the criticisms that the intersectionality approach has received is that, although it is theoretically well developed, there exists a huge gap between the theory and methods used. In addition, most of its use in health research has been primarily in the form of qualitative studies (Bauer 2014). Recently, several authors have developed guidelines to apply intersectionality in quantitative research (Bauer 2014; Spierings 2012; Rouhani 2014).

One of the frameworks proposed (Spierings 2012) describes three steps required to test interaction effects across social groups: **classification**, **description** and **drawing differences**. Rouhani (Rouhani 2014) explains this framework suggesting that the key principles of intersectionality mentioned in the previous section be at the forefront throughout all phases of the research process. For example, when developing an intersectionality-informed research question the author must consider which categories will be included by asking "Who is being studied? Who is being compared to whom and why, and whether the research is framed within the current political, societal or cultural context". The last part reinforces the importance of contextual factors when applying intersectionality.

The **classification** part consists of defining which categories are relevant for data collection in order to understand the different social positions individuals occupy. Some authors consider that traditional quantitative analysis do not represent the personal narratives typically captured by qualitative methods. To overcome this challenge Spiering suggests using detailed classification of sex and other identity variables (present in most surveys) to create numerous categories, that is, creating an intersectional identity matrix that crosses each variable so that each subgroup is uniquely classified. In a simplified example, if studying gender and race, four groups could be created: black woman, black man, white woman, white men. However, when working with a limited sample size there has to be a balance between the number of categories and the statistical power achieved. Strategies to create a sufficient sample size

would include: limiting the number of intersections (eg. gender, race and class), create only the categories with sufficient size with cross-tabulations and pooling waves, surveys or countries. Another way to dealing with insufficient statistical power would be to increase the alpha-level to 0.10.

Sometimes researchers work with secondary data and can't influence much the design. However, if possible, the researchers should improve data collection by: ensuring the data set is large enough to construct at least three-way interactions; oversampling disadvantaged groups; including population groups that are currently excluded in national surveys and refining the questionnaire to capture greater detail of social identity groups (Rouhani 2014).

The **description** part consists of providing figures on the population on a whole and for each of the subgroups. Beside measures of centrality (eg. mean) the differences within a groups can be provided by including measures of variability to check for the heterogeneity within a group (Spierings 2012).

Finally, in order to **draw inferences**, all the relevant variables should be included in model as explanatory variables. To incorporate intersectionality one should allow variables to intersect with one another. Rouhani suggests performing first a model with only the main effects, then a second model with the main effects and the two-way interactions, next a model with the main effects, two-way and three-way interactions, and so on. The best model would then be checked by means of the R^2 or the AIC test. The results would be showed by means of stratification between categories or subgroups.

In addition to test for interaction we would really recommend on looking at the stratified results as sometimes the interaction may not be statistically significant, maybe due to a lack of statistical power, but the stratification shows opposite results in the different groups.

Authors also recommend the use of more complex models like multilevel analyses to account for the social locations, forces, factors and power structures that shape and influence human life.

Examples of quantitative applications of intersectionality analyses

As explained throughout the document, apart from socioeconomic position, there are other social relations that generate health inequalities such as, for example, gender, ethnicity or migration status. If these axes are not considered properly in the analyses of public policies systematic errors can be produced and wrong results, and thus decisions, can be derived. For example, the design and analysis of research may cause systematic gender-dependent errors to be produced in results because of gender insensitivity or androcentrism. Based on the paper by Ruiz-Cantero et al. (2007) we are going to illustrate with an example why it is important that statistical analyses consider the potential intersection of gender and social class when examining variables associated with self-perceived health status. In addition, we are going to show examples from SOPHIE in which we try to incorporate intersectional analysis when studying how health inequalities are affected by a policy or by the changing macroeconomic context.

Example of gender and social-class bias in a cross-sectional study

The example is based on a study conducted on workers aged 25–64 who were married or cohabiting (2148 men and 1185 women) where the association between family demands and six health indicators was assessed (Ruiz-Cantero et al. 2007). The data were taken from the 1994 Catalan Health Survey (CHS), a cross-sectional survey based on a representative sample of the non-institutionalised population of Catalonia. Family demands were measured through three variables: household size, living with children under 15 and living with people older than 65. Multiple logistic regression models and adjusted odds ratios were fitted and 95% confidence intervals (CI) were calculated.

The authors start their analyses assuming that the impact of family demands on health does not vary by gender or occupational class. The result is that household size and living with people older than 65 has an effect on health (table 2).

Table 2 Multivariate odds ratios (OR) and 95% confidence intervals (CI) for the associations between self perceived health status and independent variables (Catalonia Health Survey, 1994)

	OR (95% CI)
Sex	
Men	1
Women	1.67 (1.37 to 2.03)
Occupational social class	
Non-manual	1
Manual	2.00 (1.66 to 2.42)
Household size	
Two	1
Three	1.08 (0.75 to 1.55)
Four	1.39 (0.98 to 1.96)
> Four	1.58 (1.08 to 2.31)
Living with children under 15	
No	1
Yes	0.96 (0.75 to 1.23)
Living with people older than 65	
No	1
Yes	0.72 (0.53 to 0.98)

Odds ratios are also adjusted for age.

In the stratified analysis by sex (table 3), we can see that in reality the effect of household size and living with people older than 65 is only seen among women.

Table 3 Multivariate odds ratios (OR) and 95% confidence intervals (CI) for the associations between self perceived health status and the independent variables by sex (Catalonia Health Survey, 1994)

	OR (95% CI)	
	Men	Women
Occupational social class		
Non-manual	1	1
Manual	1.95 (1.53 to 2.48)	2.07 (1.53 to 2.80)
Household size		
Two	1	1
Three	0.98 (0.62 to 1.57)	1.24 (0.70 to 2.19)
Four	1.23 (0.79 to 1.92)	1.62 (0.93 to 2.82)
> Four	1.13 (0.68 to 1.87)	2.48 (1.38 to 4.46)
Living with children under 15		
No	1	1
Yes	1.08 (0.79 to 1.49)	0.83 (0.57 to 1.23)
Living with people older than 65		
No	1	1
Yes	0.82 (0.56 to 1.21)	0.60 (0.36 to 0.98)

Odds ratios are also adjusted for age.

When they further stratify the analysis by social class (table 4) they observe that the effect of household size and living with people older than 65 was in fact only true among women of manual social classes.

Table 4 Multivariate odds ratios (OR) and 95% confidence intervals (CI) for the associations between self perceived health status and independent variables by sex and occupational social class (Catalonia Health Survey, 1994)

	Men		Women	
	Non-manual	Manual	Non-manual	Manual
Household size				
Two	1	1	1	1
Three	1.13 (0.54 to 2.37)	0.91 (0.49 to 1.69)	1.64 (0.71 to 3.74)	0.98 (0.44 to 2.15)
Four	1.47 (0.74 to 2.91)	1.10 (0.60 to 2.00)	1.36 (0.60 to 3.08)	1.80 (0.83 to 3.89)
> Four	1.63 (0.74 to 3.59)	0.91 (0.46 to 1.77)	2.16 (0.90 to 5.21)	2.74 (1.22 to 6.17)
Living with children under 15				
No	1	1	1	1
Yes	0.77 (0.46 to 1.28)	1.37 (0.91 to 2.07)	0.66 (0.37 to 1.20)	1.05 (0.62 to 1.78)
Living with people older than 65				
No	1	1	1	1
Yes	0.88 (0.48 to 1.62)	0.77 (0.47 to 1.26)	1.15 (0.57 to 2.32)	0.33 (0.16 to 0.66)

Odds ratios are also adjusted for age.

The result is that what we observed at the beginning for all the population in the study, that is, household size and living with older people having an effect on health is only true for an intersection of gender and social class: women of manual classes.

This study exemplifies the importance of using an intersectional perspective when analysing different social determinants of health. However, this cross-sectional example is also relevant for the analysis of policy impacts and other social determinants of health. An analysis of the whole population, or taking into account only one potential dimension of inequality, can disregard an existing association or effect that emerges only in a further stratified analysis. That is why it is important to consider the intersections of different social determinants when analysing the health effects of a given policy.

Examples from SOPHIE

In the SOPHIE project we are trying to incorporate this perspective when studying how health inequalities are affected by a policy or by the changing macroeconomic context. Two examples follow.

The evolution of mental health in Spain during the economic crisis

In the first of the studies (Bartoll et al. 2014) we described significant changes of opposite direction between Spanish men and women's mental health when we compared the prevalence before and after the onset of the economic crisis. In particular, we observed an increase in poor mental health in men (Prevalence Ratio in 2011 vs 2006: 1.15) and a decrease in women (PR 0.92). Had we not stratified this analysis, we would have observed no significant changes. Moreover, by further stratifying the analysis by age and social class, we could show that men's mental health worsening was actually concentrated among middle-aged (35 to 54) and manual social class men, which resulted in an increase in social class inequalities. Other groups of men experienced no change in their mental health.

The effects of an urban renewal project on health and health inequalities

In this case study of evaluation of the health equity impact of the urban renewal program "Llei de Barris" in Barcelona, we considered different intersections of inequality in both the qualitative and the quantitative parts of the evaluation. In the qualitative research (Mehdipanah et al. 2013), we compared the perceptions of two groups in one neighbourhood, one made up of senior native residents and one of mainly youth immigrants. We could observe that the combination of both age and immigrant status determined the different and sometimes opposite opinions of these two groups on some of the reformed public spaces or on the change in the population composition.

In the quantitative, quasi-experimental analysis (Mehdipanah et al. 2014), we analysed the change in self-rated health and mental health among residents in intervened and comparison neighbourhoods before and after the intervention. Again, we stratified the analysis by sex, then by sex and social class. For mental health, the pattern by sex differed with little change among women. Among men, poor mental health increased significantly in comparison neighbourhoods and non-significantly in intervened neighbourhoods, thus showing a "protective" role of the intervention in the worsening of mental health in intervened neighbourhoods. For self-rated health, we found a similar pattern in men and women, but stratification by social class revealed that the self-rated health improvement in intervened neighbourhoods was concentrated among residents of manual social class.

Conclusions

This guide has showed that even socio-economic position is the most studied form of social inequality, there are other social relations such as for example, gender, ethnicity or migration status that generate health inequalities. These dimensions of health inequalities are intertwined mechanisms of power relations and interact among them so inequalities by race, gender, social class and sexuality must be considered in tandem rather than distinctly. Intersections in inequalities in health remain underexplored, therefore, not only research on health inequalities but also the design of policies and the study of the impact of a policy on health equity needs to take into consideration all these dimensions, as well as their intersections. This guide has aimed to raise this issue by introducing central concepts of intersectionality theory and questions to consider in an intersectionality-based policy analyses. In addition, it has presented some guidelines to perform intersectional quantitative analyses and showed examples of how one-dimensional analyses of population health and health inequalities can mask evidence of true health effects. We encourage the researchers of SOPHIE as well as other researchers on public policies and their impact on health inequalities to use the intersectionality approach and to collaborate to spread its use so that inequalities in health and their intersections can be properly understood.

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