

An evaluation of the effects of Llei de Barris on the health and wellbeing of neighbours in Barcelona

Roshanak Mehdipanah
Agència de Salut Pública de Barcelona

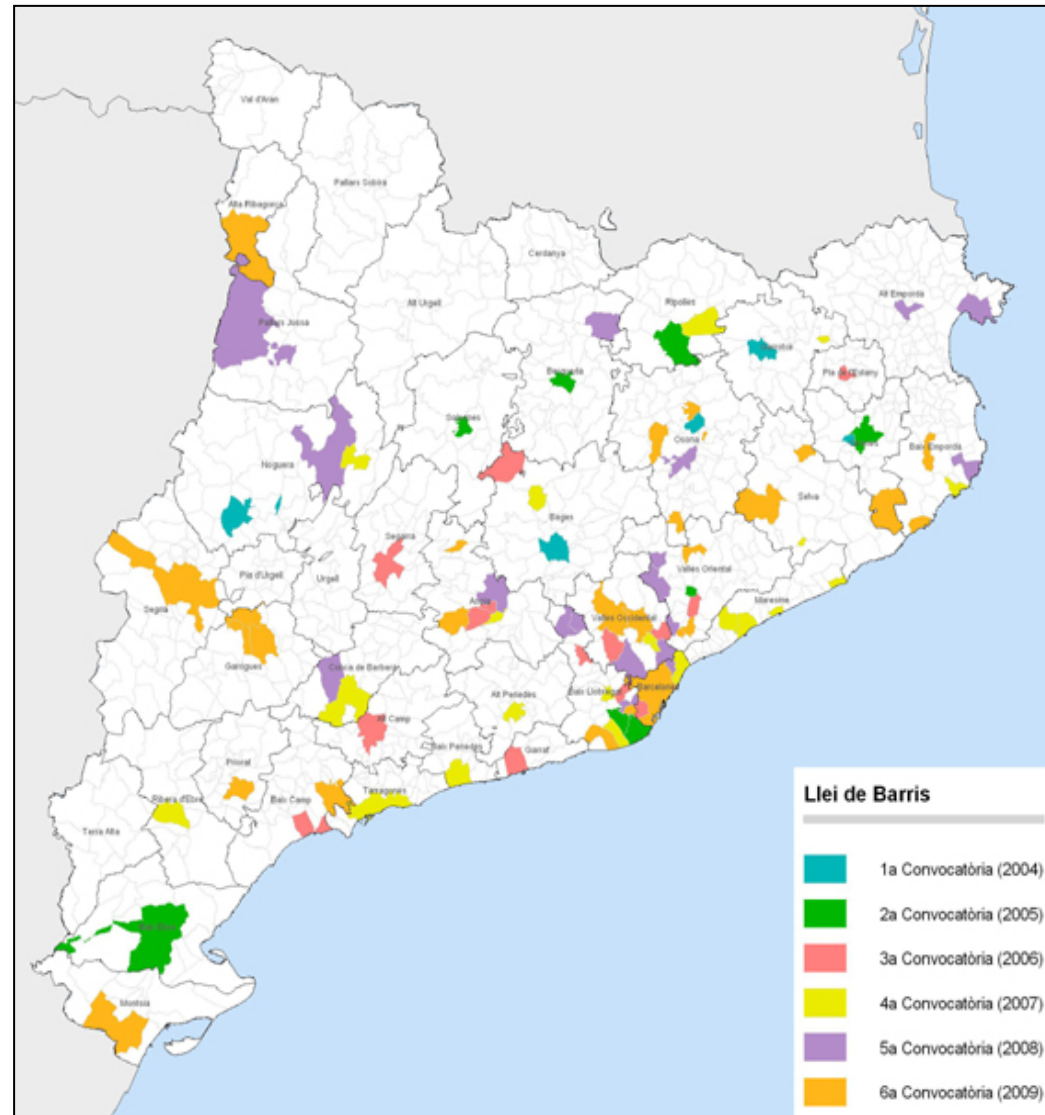
The Llei de Barris (Neighbourhood Law)

Goal: *to improve the physical, economic and social status of deprived neighbourhoods.*

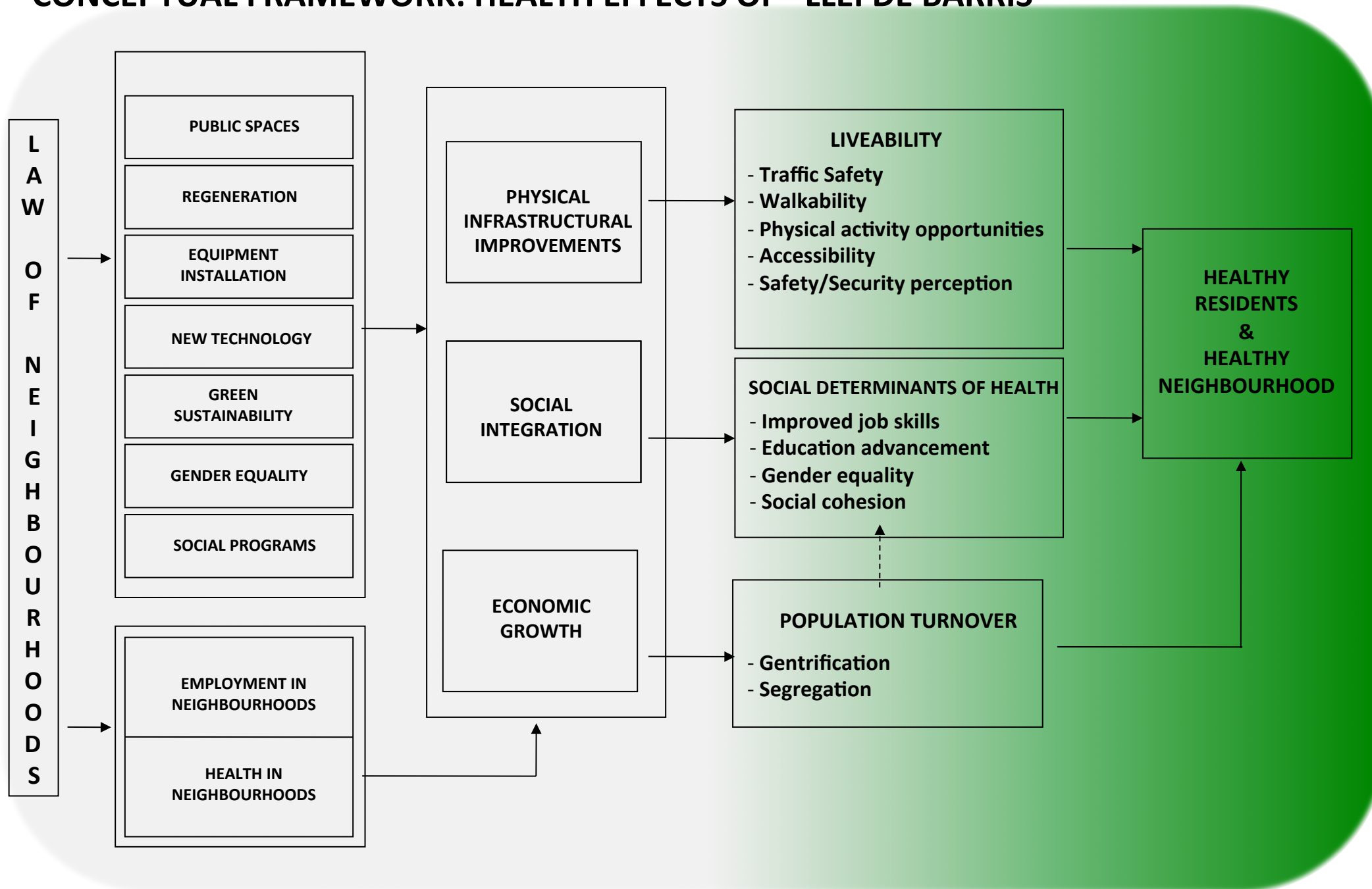
- The initiative consists of partial funding (approximately 50%) from the regional government to selected municipal governments with urban renewal proposals.
- 148 neighbourhoods across Catalonia have participated in the initiative with approximately 2 billion euros invested.

City of Barcelona:

- 12 of 73 neighbourhoods have participated.
- 10% of Barcelona's population (1.6 million) directly affected.



CONCEPTUAL FRAMEWORK: HEALTH EFFECTS OF “LLEI DE BARRIS”



Study Overview

Part 1

- Using *concept mapping* we worked with neighbours in 3 intervened neighbourhoods in Barcelona (Roquetes and Santa Caterina) to uncover some of the changes that had occurred in recent years throughout the neighbourhood that had affected their well-being.

Part 2

- Using the Barcelona Health Surveys (2001, 2006 and 2011), we studied the possible effects of the Llei de Barris on self-rated health and mental health status of neighbours living in five intervened neighbourhoods while comparing the results to neighbours living in eight non-intervened neighbourhoods with similar socio-economic status.

Part 3

- Using all of our findings, we will propose a *knowledge development* evaluation paper to discuss further the different possible mechanisms of how the intervention affected health outcomes for specific populations.

Results presented

Part 1

Mehdipanah, R., Malmusi, D., Muntaner, C., and Borrell, C. (2013) *An evaluation of an urban renewal program and its effects on neighborhood residents' overall wellbeing using concept mapping*. Health & Place. In press.

Part 2

Mehdipanah, R., Rodríguez-Sanz, M., Malmusi, D., Muntaner, C., Palència, L., Bartoll, X. and Borrell, C. (2013) *Evaluación cuasi-experimental de los efectos de la Ley de Barrios sobre la salud percibida y mental en barrios desfavorecidos de Barcelona*. Communication to the Latin-American Congress of Epidemiology and Public Health.

Part 1. Concept Mapping

- **Concept Mapping** is a non-traditional qualitative approach developed in the late 80s by William M. K. Trochim as a management tool in organization and later adapted for public health.
- The method provides a conceptual framework that depicts how a group or a population perceives a particular situation.
- Neighbours were asked a focus question to generate statements that were later structured and rated in order to create the cluster maps.

Focus question:

- *“One change that has occurred in my neighbourhood that has affected mine and my family’s well-being is...”*

Rating questions:

- *“Please rate each change in function of its importance for you and your family”*
- *“Please state whether the effect of this change has been positive or negative on your overall well-being.”*

Concept Mapping: Participants

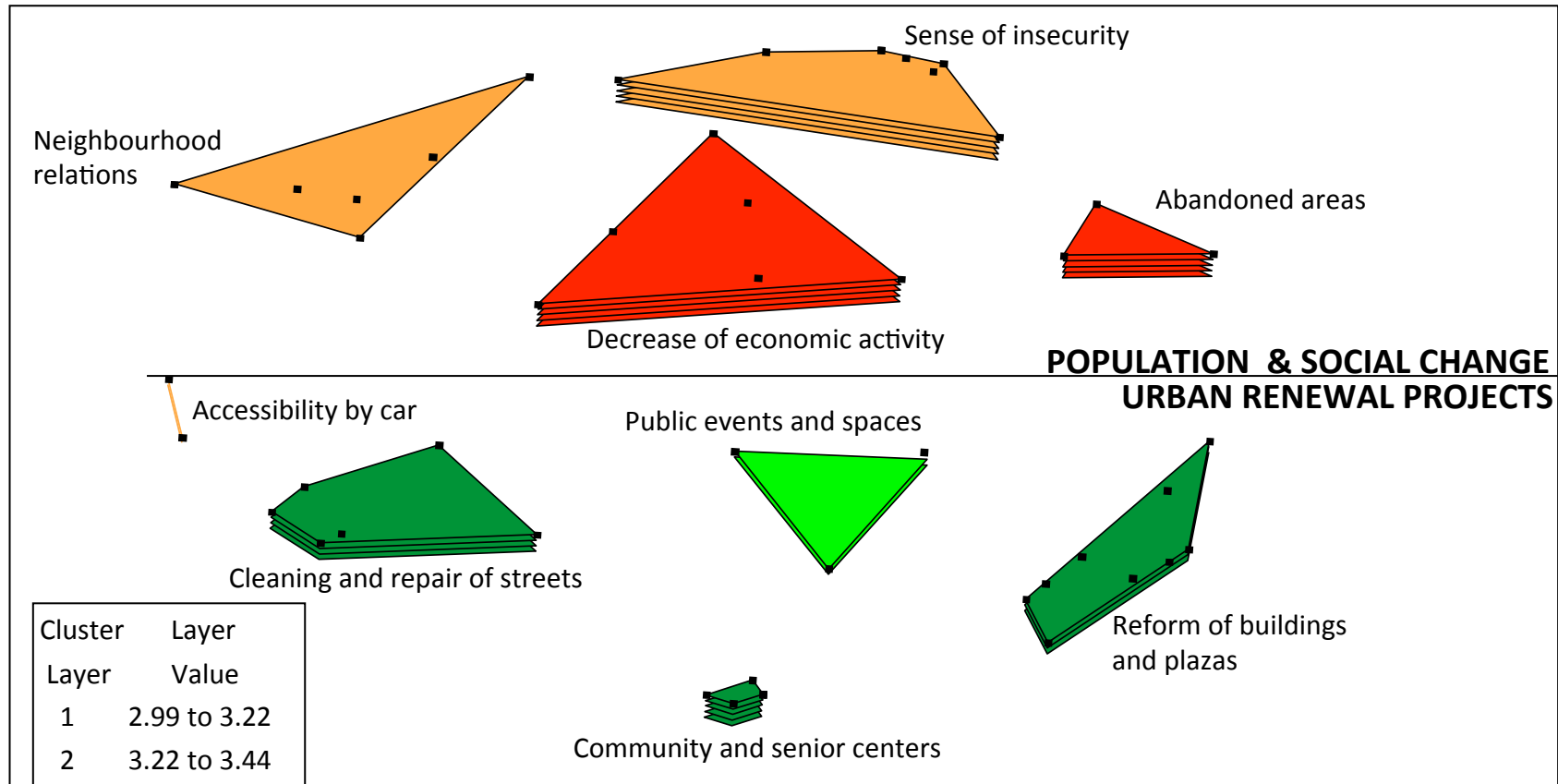
Inclusion criteria: Neighbours who have lived within the neighbourhood for more than 5 years (18 years or older).

Three groups were recruited via established networks within 2 neighbourhoods with completed interventions prior to 2011 (Santa Caterina and Roquetes) (Total N=45)

		<u>Santa Caterina</u>		<u>Roquetes</u>
		Senior Centre Group (n=12)	Youth Centre Group (n=19)	Community Centre Group (n=14)
GENDER	<i>Female</i>	50.0%	26.3%	85.7%
	<i>Male</i>	50.0%	73.7%	14.3%
AGE	<i>18-34</i>	-	100%	-
	<i>35-49</i>	-	-	28.6%
	<i>50-64</i>	41.7%	-	42.8%
	<i>65+</i>	58.3%	-	28.6%
EMPLOYMENT STATUS	<i>Employed</i>	8.3%	36.8%	35.7%
	<i>Unemployed</i>	8.3%	15.8%	7.1%
	<i>House-worker</i>	16.7%	-	42.9%
	<i>Student</i>	-	36.8%	-
	<i>Retired</i>	66.7%	-	14.3%
SOCIAL POSITION	<i>Manual</i>	8.3%	52.6%	57.1%
	<i>Non-manual</i>	66.7%	-	7.1%
RECOGNITION OF LLEI DE BARRIS	<i>Yes</i>	50.0%	42.1%	64.3%
	<i>No</i>	50.0%	57.9%	35.7%

Concept Mapping: Cluster Rating Maps

Fig 1. Average cluster rating map of the importance of each change as perceived by participants in the Santa Caterina senior group

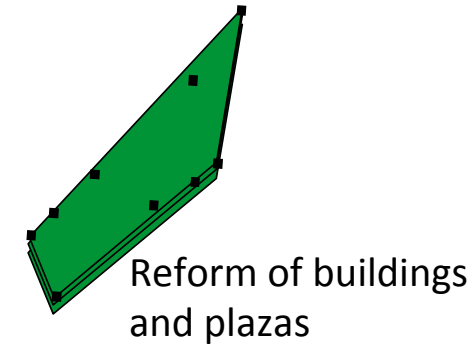


We were able to divide our maps in two sections, clusters that dealt with *population and social change* and clusters that were related to *urban renewal projects*. The red and orange represent >80% and >60% of participants respectively that indicated the statements within the cluster as negative. On the other hand, the dark and light green represent >80% and >60% of participants indicating a positive effect respectively. The thickness of the cluster indicates the importance as stated in the legend.

Concept Mapping: Cluster Rating Maps

Table. Statements within the cluster “reform of buildings and plazas” with corresponding importance values

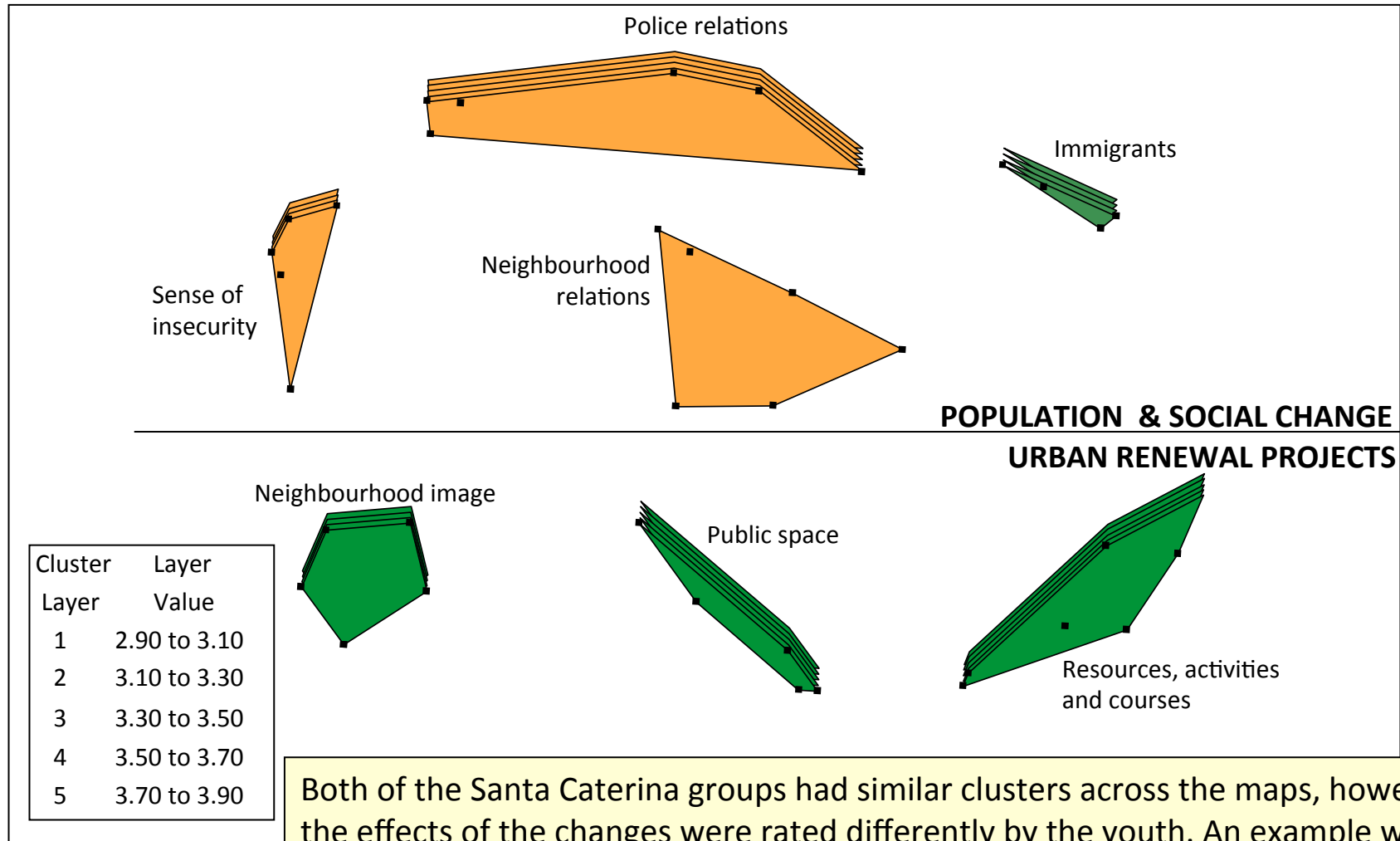
Cluster: Reform of buildings and plazas	Mean importance	% Positive
The installation of elevators in some residential buildings.	4.29	100%
The replacement of sheds for new apartments.	4	79%
The improved liveability throughout the neighbourhood.	3.86	67%
The reform of the Community Center – Sant Agustí	3.71	100%
The repair of some building facades.	3.71	100%
The reurbanization of sidewalks and streets.	3.71	88%
The reform and re-opening of the Santa Caterina market.	3.57	96%
The reform of plazas throughout the neighbourhood.	3.29	100%
The reform of the central plaza, Pou de la Figuera.	2.71	63%
The replacement of old benches with new single-person benches.	2.29	50%
AVERAGE	3.51	
MEDIAN	3.71	



(Highlighted statements are those that formed part of the Neighbourhood Law projects).

Concept Mapping: Cluster Rating Maps

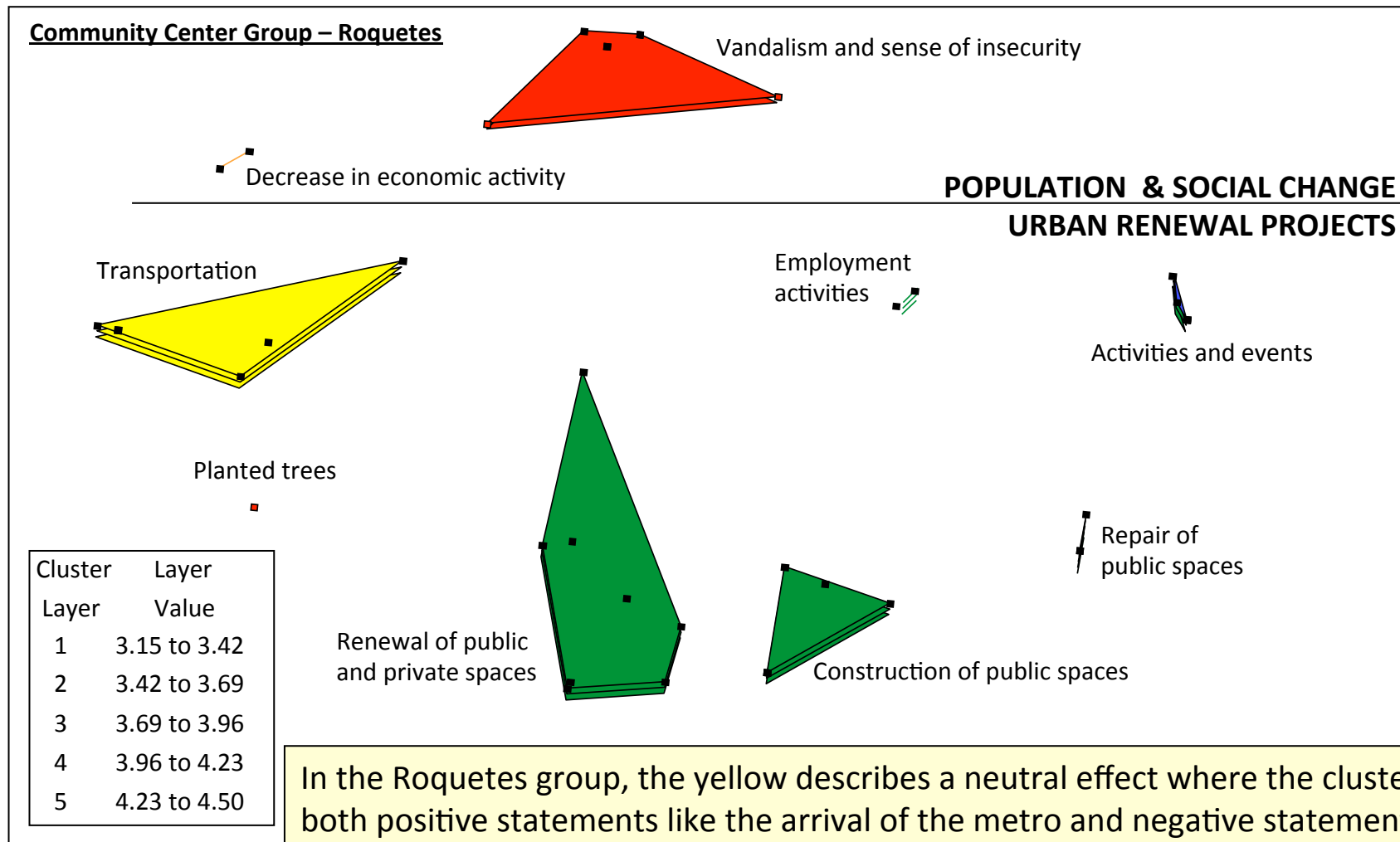
Fig 1. Average cluster rating map of the importance of each change as perceived by participants in the Santa Caterina youth group



Both of the Santa Caterina groups had similar clusters across the maps, however some of the effects of the changes were rated differently by the youth. An example was the increased police surveillance, which the senior group perceived as positive while the majority of the youth group considered it as negative for their well-being.

Concept Mapping: Cluster Rating Maps

Fig 1. Average cluster rating map of the importance of each change as perceived by participants in the Roquetes community group



In the Roquetes group, the yellow describes a neutral effect where the cluster contains both positive statements like the arrival of the metro and negative statements like the traffic in the main street.

Conclusions from Concept Mapping

- The majority of projects within the Neighbourhood Law were perceived as having both positive and important effects on the well-being of participants.
- The division in the map indicating *urban renewal changes* and those of *population and social change* correspond with the proposed conceptual framework.
- The study also highlights the importance of incorporating participants with different characteristics (age, gender, socioeconomic positions, etc.) in order to better understand the effects of the intervention on different populations.

Part 2. Quasi-experimental Study

Preliminary results

- Pre (2001 & 2006) post (2011) using the Barcelona Health Survey
 - 2001 N total = 8842 (N intervened: 998 & N control: 1881)
 - 2006 N total = 2657 (N intervened: 274 & N control: 504)
 - 2011 N total = 4137 (N intervened: 398 & N control: 824)
- Dependent variables:
 - “Poor” Self-rated health (fair or poor)
 - “At risk” Mental health (GHQ-12 > 2)

The dependent variables were chosen based on various factors including their availability in all the surveys and the short time period post intervention to see the effects.

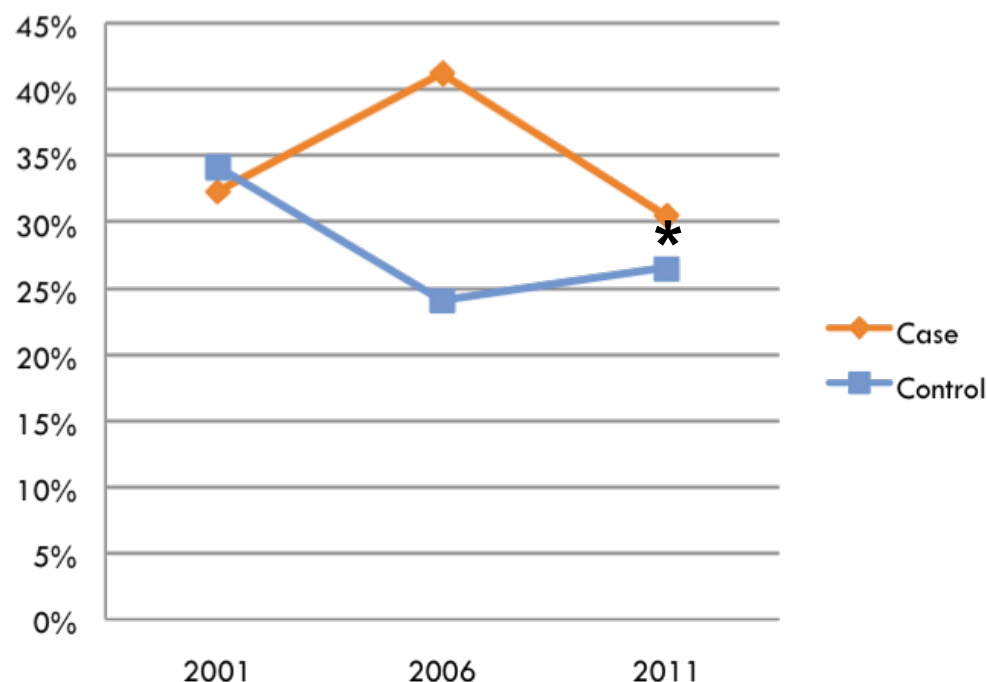
Map of Control and Intervened Neighbourhoods

Control neighbourhoods were selected based on indicators from the 2001 Census.



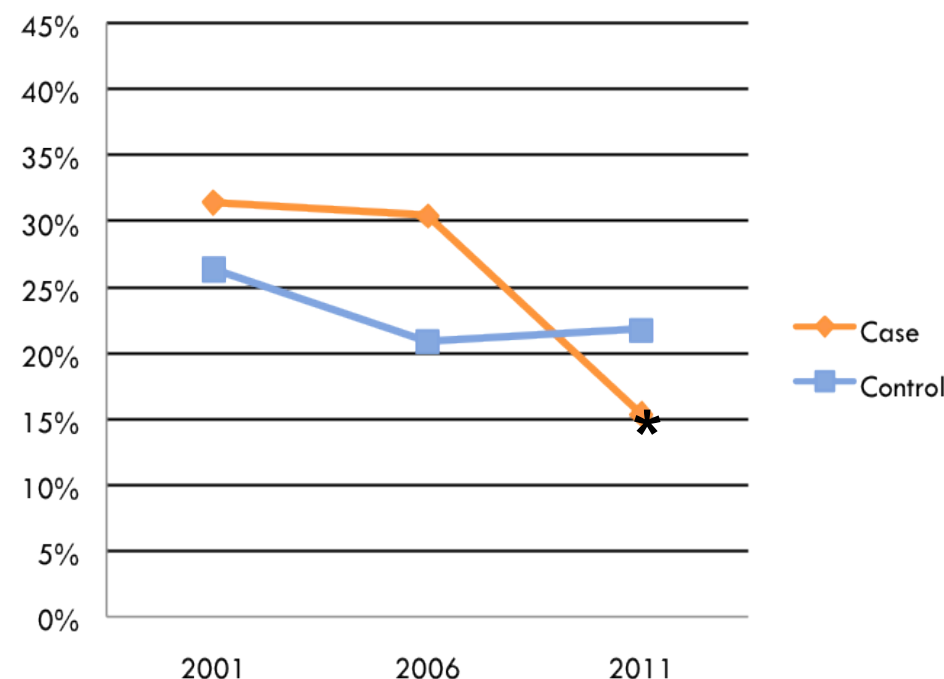
“Poor” Self-rated Health

Poor Self-Rated Health - WOMEN



In women we see a significant drop in “poor” self-rated health within intervened neighbourhoods while no significant changes are observed in the control neighbourhoods.

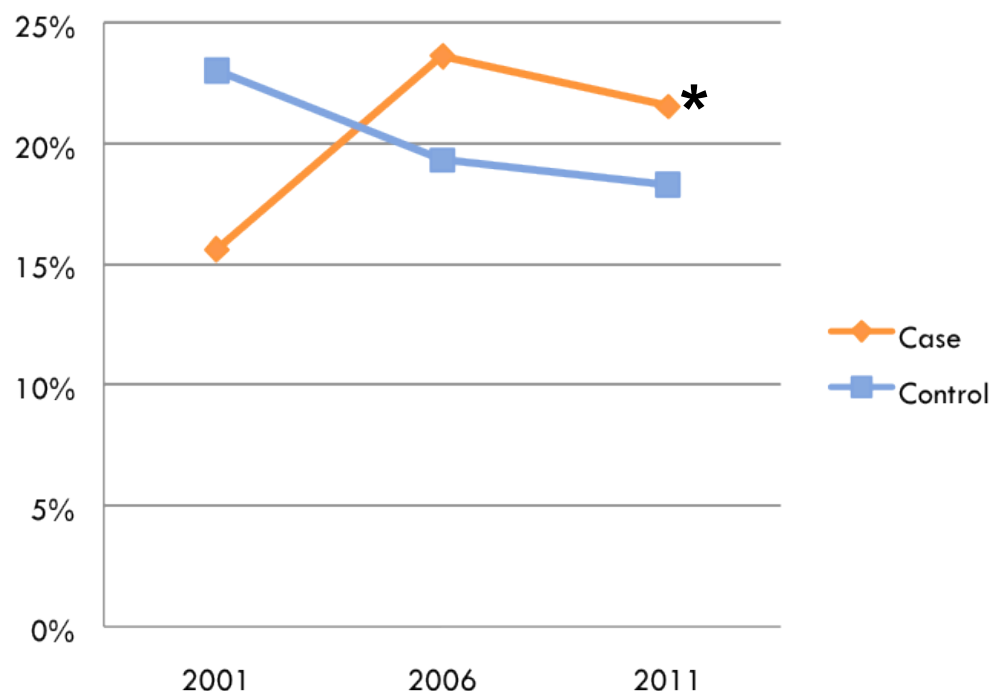
Poor Self-Rated Health - MEN



In men we see a significant drop in “poor” self-rated health within intervened neighbourhoods while no significant changes are observed in the control neighbourhoods.

“At risk” Mental Health

At risk - Mental Health - WOMEN



In women we see a significant drop in “at risk” mental health within intervened neighbourhoods while no significant changes are observed in the control neighbourhoods.

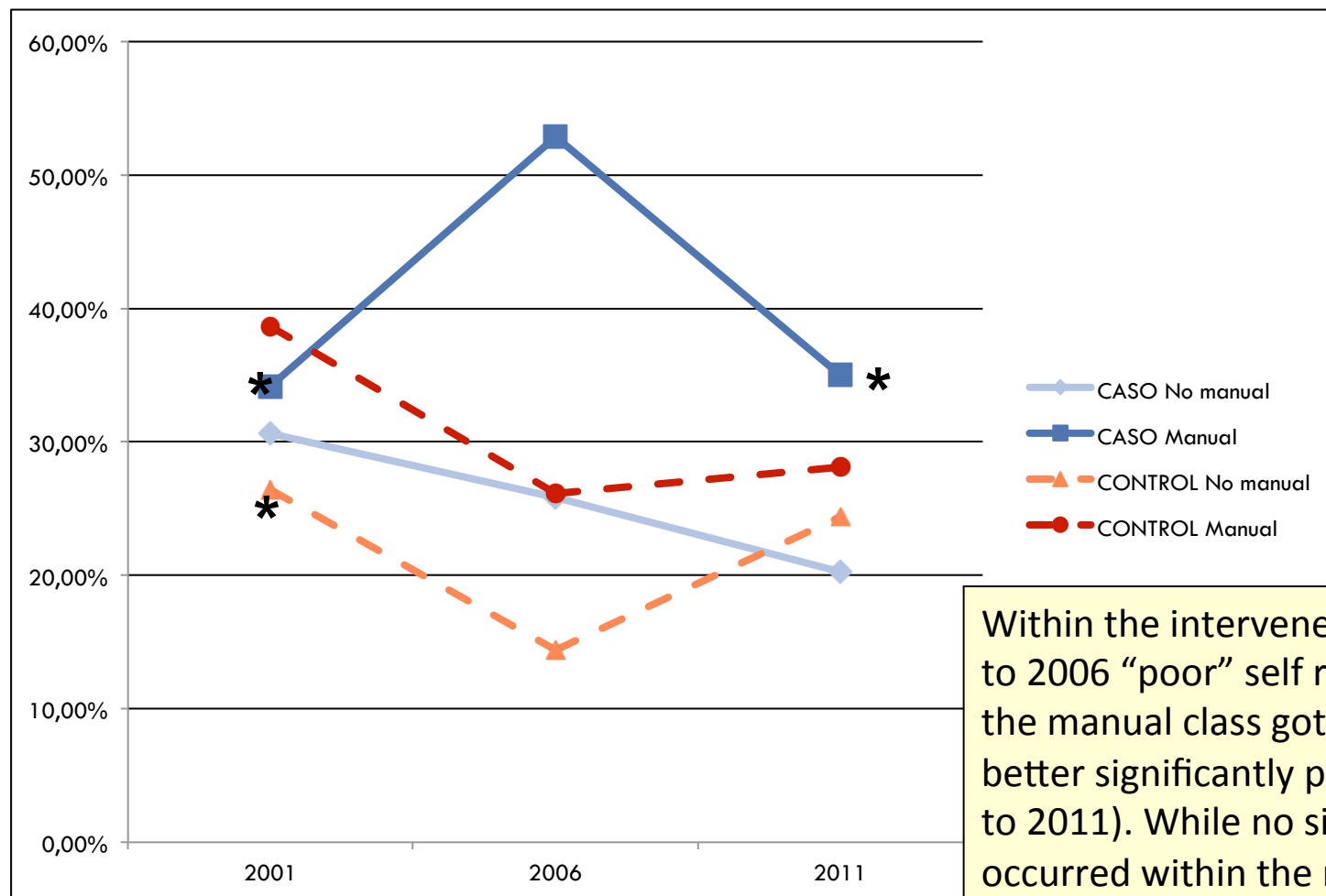
At risk - Mental Health - MEN



In men we see a significant rise in “at risk” mental health within control neighbourhoods while no significant changes are observed in the intervened neighbourhoods.

“Poor” Self-rated health and Social Class

“Poor” Self-rated health in women by social class (2006 used as reference)



Within the intervened groups, from 2001 to 2006 “poor” self rated health amongst the manual class got worst before getting better significantly post-intervention (2006 to 2011). While no significant changes occurred within the no manual class or the control group in this post period.

Conclusions from quantitative analysis

We present some of our preliminary findings:

- In both females and males, self-rated health improved significantly from 2006 to 2011 within the intervened group while no significant changes were observed in the control groups.
- Within females, during the 2006 to 2011 a significant decrease of “at risk” mental health was observed in the intervened group, while a significant increase of “at-risk” mental health occurred within males in the control group.
- When stratified by social class position, “poor” self-rated health decreased significantly only within women from manual class in the intervened neighbourhoods.
- These findings are aligned with our hypothesis that the Neighbourhood Law did improve self-rated and mental health outcomes.
- Results from this analysis will be used to support potential theories of how urban renewal programs affect the health and wellbeing of neighbours.

**If you have any questions please
contact:
rmehdipa@aspb.cat**

sophie 

C S B Consorci Sanitari
de Barcelona

 Agència
de Salut Pública