Research Paper

Grenoble urban health policies

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Abstract

Life environment is a major health determinant, so the planning process, that shapes cities, are powerful elements to improve population health and promote greater equity. This contribution investigates how the city of Grenoble accomplish to introduce in planning documents urban measure capable to improve citizens' well-being and to have a good impact on their health.
At first, we provide a brief historical perspective on the relationship of health and planning in Grenoble's policies.
Then, we discuss the current city approaches to integrate health in urban planning strategies, through the analysis of its regulatory plans, and a series of interviews with counsellors' members and technicians at the city offices. Although in the currently urban plans, there is not a specific entry on the health question, we have identified several actions and rules that contribute to fostering a healthier environment and improve personal well-being behaviours, consistently with the health in all policies strategy of the city. The proposed is illustrated by some examples of public space transformation that contribute to increasing life expectancy, prevention and promotion of health.

Keywords

urban project, urban health policies, socio-spatial justice, behaviour change, Grenoble (Fr)

1. Introduction

For a long period, health was considered as the absence of disease. That vision was linked to a negative conception because health was only considered in opposition to sickness, illnesses, or infirmity. That led to confusion between medical care and health. During the last century, the epidemiological landscape has changed considerably, and this vision did not allow to face more recently health problems, like the chronic diseases, that have become dominant in terms of mortality and morbidity.

More recently, following the creation of the World health organization, a new point of view rise, and a global and positive vision of health was determined. Finally, it was declared that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO World Health Organization, 1948). This vision underlines how health is related to all aspects of life and is affected by many factors. Indeed well-being results from the interaction between humans and the biological, chemical, physical, psychological, and social agents of their environment (WHO World Health Organization, 1994). Starting from this definition the life environment became a major health determinant (Barton and Grant, 2006; Pacyna and Pacyna, 2016), therefore where we live is a major factor in our health. Due to the increasing urbanization of the world's population cities have a crucial role to play in creating healthy urban environments. The fact that the majority of people live in urban environments, requires that special attention should be paid to urban policies and their effects on health.

Consequently, the planning process, that shapes cities, are powerful elements to improve population health and promote greater equity (Corburn, 2009).

Several studies show the connection between urban planning and health. The literature endorses the view that urban green spaces, as part of the wider environmental context, promote health and well-being across the life course (Douglas, Lennon and Scott, 2017). Living near green space reduces the occurrence of many diseases and mental disorders such as anxiety disorders, depression, asthma, stroke(Lee and Maheswaran, 2011; Laïlle, *et al.*, 2014; Thompson, 2016). Evidence also illustrates how urban form influences physical activity, obesity, and morbidity (Townshend and Lake, 2009; Halloran, 2011; Ewing *et al.*, 2014; Jansen *et al.*, 2017).

This research highlights how public policies and urban planning can contribute to the realization of the new vision of global health. In particular we investigate how the city of Grenoble (French) accomplish to introduce some urban measure able to improve citizens well-been and to have a good impact on their health.

At the European level, the link between health and urban policies is emboldened with several healthy city policies. Among these the most exemplary is the WHO European Healthy Cities Network , which aims to put health high on the social and political agenda of cities (Barton and Grant, 2006; Tsouros, 2015). The cooperation between cities allows the exchange of experiences and information, stimulates the debate, and promotes meeting and common action. The goal is to maximize disease prevention via a "whole system" approach, which integrates multidisciplinary action through all public policies and at all levels of the territory. It puts health on the agenda of policymakers in all sectors and at all levels, directing them to be aware of the health consequences of their decisions and to accept their responsibilities for health (WHO World Health Organization, 1986). The network intends to engage local administrations in developing health through a process of political commitment, institutional change, capacity building, partnership-based planning, and innovative projects (Edwards and Tsouros, 2008).

Moreover, European Union enrol World Health Organization strategies in several Action Programmes that propose to achieve a quality of the environment that does not give rise to significant impacts or risks to human health.

At the French level, those recommendations are not integrated into specific regulatory instruments that put health at the centre of urban policies, but the choice is left to the individual local authorities.

In this article, we discuss the new city governances to integrate health in urban planning strategies.

At first, we provide a brief historical perspective on the relationship of health and planning in Grenoble's policies.

Then, we discuss the current city approaches to integrate health in urban planning strategies, through the analysis of its regulatory plans, and a series of interviews with counsellors' members and technicians at the city offices.

Finally, we highlight several actions and rules that contribute to fostering a healthier environment and improve personal well-being behaviours, consistently with the health in all policies strategy of the city.

2. Health problems in Grenoble

The city of Grenoble is located at the foot of the French Alps, in a Y-shaped alluvial valley and is surrounded by three main mountains. Its deep and landlocked orography has a strong impact on the meteorology and, thus, on the air quality. Therefore, Grenoble metropolitan area has a particular sensitivity to air pollution due to its peculiar geographical location and to the intense human activity on its territory. The region is a strategic traffic crossroad, connecting France to Northern Italy and, the area is also strongly industrialized. For these reasons, Grenoble stands among the most polluted cities in France.

Atmo, the public observatory in charge of monitoring the air quality in the Grenoble region, is constantly giving alerts about its bad conditions. In particular, a significant amount of pollutants is detected in some specific areas, in proximity of the highways crossing the city, where mainly low-income neighbourhoods are located. This is producing spatial and social health inequalities in the city.

Air pollution is one of the most important health problems that concern the city population, in fact, exposure to particulate matter increases respiratory and cardiovascular morbidity and mortality. A recent study led at University of Grenoble show that the 6.8% of incident lung cancer cases were attributable to air pollution and that 5.1% of total, non-accidental death are attributable to long tern exposure to fine particulate matter (Morelli *et al.*, 2016), emphasizing the impact of air pollution on the health risk for the inhabitants. Public authorities look to face these issues with a consistent and inclusive set of harm reduction policies and practices most of all link to urban transformation.

3. Historical perspective

The city of Grenoble has always been pioneering and innovator in being aware of health and environmental problems. It has, ahead the time, put in place policies that aim to improve the health and the quality of life of these inhabitants strongly connected with the renovation of the urban space.

Indeed, it has, ahead the time, works on a whole system approach to health policies. The goal was to maximise disease prevention integrating multidisciplinary action through all public policies and at all levels of the territory. Grenoble has set policies that aim to improve the health and the quality of life of these inhabitants through inclusive planning and resilient project of urban space.

In the sixties, the city saw a strong and fast urban expansion due to the host of 1968 Olympic Winter Games. During this time, the administration prioritised the social aspect of public health through the connection between urban transformation and social issues. Urban policies became the way to reduce inequalities of health-care access, education and services, and to avoid the exclusion of disadvantaged families.

From 1965 to 1983 Mayor Hubert Dubedout led the city of Grenoble. The administration overtake the sectoral aspect of the city governance, and for the first time articulated together planning and social policies to operate with conjoint objectives. To underline this transformation the municipality also changed its vocabulary, they no longer speak about urban planning but rather about urban policies. The news strategies do not consist only of spatial transformation but of the construction of a community life framework, with the creation of social relationship and processes (Motte, 1983). Urban policies became the way to reduce inequalities of access to health-care, education and services, and to avoid the exclusion of disadvantaged families.

One of the main points of these strategies was the requalification of the historical city centre to banish unhealthy homes. The mayor chose not to continue with a demolition and reconstruction policy (as

planned by the previous city council) because he didn't want to destroy people's home and life and neither to relocate them in the suburbs. The new proposal was to keep the population in place, restoring unhealthy building without the destruction of the urban form, and to develop social life with closer services. Particular attention was paid to the old population living in this district. A special commission was created to improve aged people's quality of life, it aims to manage the improving of housing condition and to boost social relationship connecting lonely people.

Another main goal was to increase social exchange among inhabitants of different neighbourhoods. An important investment was made building new infrastructure. These services were located in strategic places of the city, at the intersection of neighbours populated by people of different socioeconomic status. The creation of new social centres and equipment such as library, working areas, and community centre, foster people to take part of the social initiatives and to assume collective responsibility. Moreover, sports facilities were expanded in number and size and the training of children and teenagers in the schools was increased in order to improve sports skills and habits. Finally, the number of nurseries, common/shared playschools and other places to receive early children was improved, and new areas to promote the dialogue between parents and childhood health care professionals were created.

Behind the building of each new community's equipment, there was always a social project and the aim to take care of the weaker part of society. The achievement of so many important urban project help to foster the citizen social initiatives and to appreciate a new vision that put health as a means of equality and social rights.

At the beginning of the new century, new strategies were put in place to reduce health inequalities.

In 2002 Grenoble became a member of the French Network of Healthy Cities led by the WHO (Réseau Français de Ville-Santé de l'OMS). The French Network of Healthy Cities was established in 1990 and is part of WHO European Healthy Cities programme. The French Network work to put health high on the social, economic and political agenda of city governments. Being part of this group, and coordinating it from 2012 to 2014, hardly commit the city of Grenoble to create a health-supportive environment, where people can achieve a good quality of life.

Due to the implication in the French Network of Healthy Cities, and to answer the Ottawa chart recommendation of promoting everyone's health, in 2011 Grenoble was one of the first French cities to singe a Health City Plan (Plan Municipal Santé Ville de Grenoble). This non-prescriptive document state the main priority in health matters and designates a direction to be taken in local decision to fight against social health inequalities. This exceptional initiative, (Vidales and Heritage, 2017), has the function of providing an operational framework and promoting a series of actions so that elected representatives, and technicians of different city departments and services, integrate health into their fields of work.

The Plan developed different action axes aim:

- to take care of young people and children,
- to help to develop personal skills in order to achieve their aspirations all along the life,
- to progress in detection and screening, to improve the access to the care system,
- to mobilize the private actors to health action and research,
- to create a heathier environment,

The most innovative axe is to operate on the existing physical environment. To achieve this goal the plan proposes to work on the interior and exterior air quality, to tackle the fuel poverty and the unhealthy

home, and to improve the access to physical activity and good food. In this measure, we can find for the first time some actions that attempt to modify the urban and architectural environment to provoke a health change in inhabitants' lifestyle.

In the meanwhile new travel strategies were developed to improve active mobility and increase sport habits and health behaviours. One of the main accomplished actions was to facilitate walking in urban areas improving the pedestrian signals by providing information on travel times. In 2013 The city of Grenoble and the National Institute for Prevention and Health Education (INPES) realize the project "Grenoble à Pied, c'est bon pour la santé" (walks in Grenoble is good for health). The project consisted in the installation of pedestrian signals showing distances in walking time rather than metrics. 270 panels target different itineraries with a walk duration between 8 and 30 minutes to encourage people to walk in the city centre (Inpse and Ville de Grenoble, 2014).

Starting from 1995 the ecological citizen party rise in the city government, it was in power together with the socialist party until obtaining the majority in 2014. In this period also another vision take place in the political agenda: the human health could be reach through the planet health. For this reason the main urban transformation were approached with ecological and environmental principles. The greatest example of this type of policy is the creation of a new mixed district called Caserne de Bonne, build on military wasteland near the city centre. In 2009, it was labelling ad first French Eco district.

In this context, a radical change in the organization of the French state must also be underlined. French public action was characterized by an ultra-sectoral approach held by the central administration (Muller, 1990)). Since the 1980s, a decentralization process was initiated to distribute competences at a local government, in this frame a new territorial administrative entity was created in 2015 the Metropolitan city of Grenoble (Grenoble Metropole). It is composed of 49 communes cooperating on different aspect of public life. This institution has, beside others, also the decisional power on urbanism, housing and mobility. Starting from this creation new policies were developed on these topics and a series of regulatory documents were approved to improve the quality of life and health of the inhabitants of the entire metropolis.

4. Methods

To better understand all the aspect of the current urban health policies of Grenoble city we had a combined approach of analytical research and field work: urban planning documents comparison, councils members and technicians interviews, and the analysis of urban projects in progress or already finalized.

Firs, the currently local urban planning system was analysed to identify how the several regulatory tolls take into account the health issues and whether they settle special strategies and rules to improve health trajectories. The urban management tools form Grenoble Metropolitan area include political guidelines and mandatory articles to the urban planning of a large and different territory composed of 49 very varied, rural, urban, and mountain municipalities. Most of the regulatory tolls were adopted during the last years.

We examined:

- The *Plan Local d'Urbanisme Intercomunal* (PLUI), the land use regulation at the local level define urban rules for the 49 municipality of the Grenoble agglomeration and is composed of four parts. The *Rapport de présentation*, a general document that presents the characteristics of the territory, economic and demographic projections and environmental assessment. The *Projet d'Aménagement et de Développement Durables* (PADD) which sets out development guidelines and crosscutting strategies and, determined the main urban project. The PADD is based on a territorial diagnosis that highlights strengths and weakness of the region. The regulation that condition future constructions in terms of land occupation, space organisation and building rights (volume and layout). Those rules explain the PADD objectives with written documents and graphic plan specifying housing quality, zoning, urban renewal and preservation of environment and heritage. Finally the PLUI introduce three main supervised theme (air quality, landscape and biodiversity and, risks) for which, special orientation are proposed. Urban authorisation have to be compatible with those *Orientation d'Aménagement et de Programmation* (OAP). The PLUI have been adopted the 20th December 2019;

- The *Plan de Déplacement Urbain* (PDU) that aims to give direction and to anticipate changes on the urban mobility (public transport, cycling, walking, cars, trains, etc.) for the transport of people and goods have been adopted the 7th November 2019 a with a view of action until 2030.

- The *Plan Air-Énergie-Climat* with the aim of reducing greenhouse gas, adapting to climate change and improve air quality, was adopted the 7th February 2020.

- The *Programme Local de l'Habitat* approved the 10th November 2017. It defines the major housing guidelines for the next six years, including indications (quantitative, qualitative and location) for the construction and rehabilitation of private and public housing

Later, one to one semi structured interviews were lead with councillor's members of the city of Grenoble both health and urban representatives. Moreover, interviews were conducted with city and Metropolis technicians who work at the redaction of the main local plans. The aim of these interviews was to explore the vision of respondents' concerning the interaction between health and spatial planning. Firstly, we ask about their role and starting from when their work/were concerned by health issues in urban planning. Then we explore which strategies they were leading to tackling health problems such as sedentarily, air pollution or spatial inequalities.

5. Results

One of the main argument that emerged from our research was the importance of a multisectoral approach in local policies to face health problem. As one of the council members said "Just as the determinants of health are multifactorial, the solutions must come from many fronts".

He father added "We have to assume that the care of our health is not only a task of the heath service but also a personal commitment and consequently it is determinate by our socioeconomic life environment". If everyone is responsible of is one values, health behaviours, nutritional diet, drinking or smoking habits, sedentary or active lifestyle, a part of those choices are also determined by external factors. Hence, good health is a sharing responsibility, from the central health system to the local authorities who manage the territory. At local level, health protection can be achieved through a wide series of measure from a better access to facility care, to a development of an active social support network, to a better configuration of public and private space.

Although in the currently urban plan there is not a specific entry on the health question we have identified several actions and rules that contribute to foster a healthier environment and improve personal well-being behaviours, consistently with the health in all policies strategy of the city.

Another main point in the urban heath policies was to act on different levers to initiate changes in citizens' behaviour. Every time that a coercive or restrictive action was make, it was followed by a side measure incentive or persuasive. This type of strategy is able to condition different levers and therefore obtain more results in terms of changes in people behaviour. Moreover, as often the compensatory measure cannot be found in the same sector of the first rule, it also had the great benefit of strengthening interactions between economic, social and spatial policies to realise a common and shared programs.

For example, for the construction of an appeased city centre, many spatial change have been made such as pedestrianization, that reduce the place of car in city centre. Park line have been replaced by bike line and several restriction have been acted to the transit of vehicles. If on one side those changes oppose to a wrong car habit and a sedentary lifestyle and improve active mobility, throw the realisation of comfortable sidewalk and safety cycle path. Spatial transformations have also been accompanied by economic and social measures as funding for businesses to buy electric vehicles (enabled to cross the pedestrian area of the city centre) or subvention for disadvantage household for public transport.

6. Conclusion

“The population is very familiar with the health side of social security. On the impact of the environment on health we are at zero, on the aspect of food, they have modest knowledge. The imaginary of the car, fast food and cigarettes is still too valued and carried by very powerful actors in the dominant representation and the big brands are too strong compared to the health discourse”

These words of a councillor highlight the large gap that have to be fill in next years. If politicians and technicians during the last years have become familiar to the intersection of health in all policies and have start to discuss about, looking for new solution a large part of the population are still few informed and involved on those topic.

People still live some rules, like bothered speed or traffic limitation, as constraining, without understanding the long duration benefit in terms of well-been, life esperance and economy.

However, we found that health is a very good argument to justify urban policies, it is an efficacy lever because it touch everyone, more directly that environment.

Another interesting point that emerge from our study is the lack of impact indicator. No one of the PLUI documents plan a tools to measure the influence of spatial change on citizen behaviours. Moreover, we have to highlight that the big discrepancy between the timing of the project and the health trajectory is an additional factor that delays the analysis of the results of this urban project.

As a councillors said “we are able to do prospective study as health impact assessment on urban project but the monitoring is still a challenge”.

Infect we have to consider that the realisation of a project have a long timing starting form the first prospective study and the first sketch until the realisation and the setting of population, 10-15 years can pass. Moreover, health timing is still longer. The effects of exposure to risk factors on the can have an

effect even after several decades as well as good practise. Additionally, the mobility of population is an extra weakness to create a panel and monitor the evolution over time.

We have seen how punctually local administrations face to health urban problems best respond to the challenges of their territory. Nevertheless, if we are willing to be ambitious in terms of global approach of health impact, national authorities must fix priorities and make decisions to face the urban complexity.

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