

SUMMARY OF ARTICLE: doi: <http://dx.doi.org/10.12795/rea.2019.i38.05>

## Territorial Vulnerability and Accessibility to Proximity Services for Older People in the City of Valencia

María Dolores Pitarch-Garrido

[maria.pitarch@uv.es](mailto:maria.pitarch@uv.es)  <https://orcid.org/0000-0001-9109-4687>

Félix Fajardo-Magraner

[felix.fajardo@uv.es](mailto:felix.fajardo@uv.es)  <https://orcid.org/0000-0003-1516-6655>

*Departamento de Geografía. Instituto Interuniversitario de Desarrollo Local. Universitat de València  
Av. Blasco Ibañez, 28. 46010 Valencia*

### KEYWORDS

Public services  
Sustainable mobility  
Accessibility  
Senior poverty  
Elderly population  
Valencia

The increase in the average age of the population in Western societies is a reality that defines new parameters of coexistence as well as new social demands. In the case of the elderly, the services guarantee not only the care, in particular to the dependents, but also the company (against loneliness). The objective of this research is to identify the vulnerable areas in the city of Valencia in terms of the socioeconomic capacity of its residents and the accessibility to the services supply to the elderly. Our hypothesis is that, despite investment efforts and improvement of the service network, there are still differences in access to them depending on the place of residence, with the central areas of the city being the best served, both from the point of view of the public and private supply. For this, a methodology already contrasted is applied (Pitarch-Garrido, Salom & Fajardo, 2018). The purpose of the analysis is to know which areas of the city are most vulnerable to the elderly who live there and to facilitate the identification of the main problems that public planning must influence (supply, type, transport, etc.).

The aging process affects all current societies, with cities being particularly vulnerable for this group. In them, the spatial structure of the service supply determines the patterns of mobility of the population and its sustainability. Proximity services, the most frequently demanded by the population, imply a certain use of time with implications for the quality of life.

In 2018, the aging rate in the city of Valencia is 20.58% and the over-aging rate is 11.5% (as defined as those older than 85 as a percentage of those over 65). The population over 64 years old is 164,341 people, of whom 25,177 are over 85 years old. The total population of the city is, in 2018, 798,538 inhabitants, one fifth is over 65 years.



In our research we have considered the services aimed at the elderly population with fixed location that are offered in the city of Valencia, both from the public and private, but particularly the first. Since the end of the last century and, above all, as a result of the economic-financial crisis of 2008, the policy of the regional and local government has tended toward restricting public spending, particularly in this type of services (Activity centres, Day centres and Residences), privatizing its offer and reducing the number of public places. This policy has led to cuts in investments aimed at increasing resources and public facilities for the elderly.

We propose a new term to define poverty or exclusion that appears, especially after the crisis, in this urban and social environment: senior poverty. These are elderly people, in particular very old (over 85 years old, over-aging), in situations of dependency, low mobility, low income (minimum or non-contributory pensions), living alone and without a family environment, residents in neighbourhoods with a low endowment of public social services or forced to move out of their usual place of residence to be able to access care services. An important part of this situation of vulnerability is the one that we propose to analyse in this article for the case of the city of Valencia: the one related to the place, that is, the part that would affect the spatial equity of senior poverty. Next, we will briefly discuss the methodology used to analyse the situation and conclusions.

The methodology developed can be replicable in any other urban context and has already been applied to other types of public services. The elements that we consider are: mobility on foot (the most appropriate and sustainable for this population group), accessibility-proximity, the qualification of such services as proximity, and, therefore, the right of users to be locate your offer in an area within your living space. The services considered are: the municipal activity centres (known as elderly associations), the day centres and the residences for the elderly. For the analysis, a distinction has been made between public, private and total services.

In favour of the sustainability of mobility, the accessibility index has been calculated for the different centres offering services for public and private elderly people on foot and public transport. The number of people that represent potential demand is also analysed, considering the total of the largest population, although not all are currently users of the service, and the area of influence of each of the supply centres is calculated, comparing it with the boundaries of the neighbourhoods. For each one of the resulting areas, both the calculated ones and the neighbourhoods, the socioeconomic variables of the resident population are considered.

From the spatial point of view, the sociodemographic information has been added at the portal level, from a mesh of square polygons of 100 meters drawn on the city of Valencia. In this way it is possible to obtain the information at an intermediate scale, between the neighbourhood (excessively large) and the portal (difficult to represent by the multitude of points). Each cell has been assigned the average value of the points of the residences and the neighbourhood. For the characterization of the different areas of the city, together with the information at the street number level (*Padrón*), different indicators of the economic situation of the neighbourhood in which they are located have been considered. With these data a Factorial Analysis of Main Components (ACP) has been carried out, which has allowed us to reduce the amount of data, being possible to establish the elements common to the associated variables. The first component has been selected, which accounts for 32.6% of the variance. The value of this component in a negative sense gives us a very accurate idea of the location of the population with the lowest income level, the lowest functional and environmental quality, low land (and housing) prices, and lack or absence of superior functions. Thus, it has been possible to map the areas (spaces below the neighbourhood level) of the city of Valencia where a low socioeconomic level with a distance relative to the public services considered is given at the same time.

The general figures of the city in terms of the number of people over 65 affected by the distance to a service centre of those analysed give us information about the social impact of their location. We have considered two thresholds from which real and potential users are far from the area of proximity to the service we have established: twenty minutes on foot and forty minutes by public transport.

Apart from general results, it is interesting to analyse the results in the case of the areas of the city that have been classified as more vulnerable. In these areas, of a lower scale than the neighbourhood, the low socio-economic level coincides with poor accessibility to services for the elderly population. We have highlighted here only the accessibility on foot, setting the same threshold as in the previous analysis: twenty



minutes. The resulting maps show the location of the vulnerable or priority intervention areas, that is, the location of most of what was previously called senior poverty. In them, the largest population affected by a distance to any of the services considered amounts to 191,775 people, of which 36,537 are over 65 years.

Given the results obtained with the application of the proposed methodology, we can affirm that it is a tool with great potential and simple to apply, provided that we have the detailed sociodemographic information at the portal level (detail of scale), both of the service offer as well as demand. The Municipal Register provides such information, although its preparation can be costly and generate resistance in the competent administration given the need to comply with the data protection law. In the case of the city of Valencia, the general results are very positive, although it is possible to detect spaces where the needs, real or potential, are not yet fully covered. It is about detecting these neighbourhoods or areas to qualify them as priorities in terms of provision of services or specific public transport.

In conclusion, and although it is clear that the entire older population, whatever their level of income, should enjoy good accessibility (proximity) to public services of proximity, the reality is that, in a situation of economic recession and containment of spending, it is necessary to prioritize investments. The analysis carried out helps public decision-making. In the analysed case, Valencia, a methodology has been developed that allows to advance in applied geography studies and that can be transferred to other urban environments.