Health literacy: another way of measuring housing quality

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Summary
Today, whether condominiums or social housing, Parisian buildings are facing a series of renovation processes that allow us to deepen the quality of their construction. This renewal affects the social life of the buildings, which has been consolidated over the years. While a building is built by materials and populations, it is also the result of history, from its construction to its daily maintenance (or degradation). Our assumption is that people who have no control over their living space are likely to suffer more health problems, in most cases without knowing exactly why, due to a lack of knowledge about the causes or health literacy in their living space. The inability to adapt to their homes or to resolve these situations independently makes us wonder: How can residents' health be influenced by their ability to control their living space? To demonstrate this, we will explain the methodology we are using to understand how people feel affected by the tension between factors that generate satisfaction or dissatisfaction and that have different effects on physical and mental health.

Environmental damage to human health has become a public issue (Boutaric* & Lascoumes**, 2008). At a rate of nine million avoidable deaths every year worldwide, it is accepted that pollution, whether of air, water or soil, strikes three times as many humans as AIDS, tuberculosis and malaria (The World Bank, 2016). However, housing interiors are not watertight shelters from the toxicities of urban life. Respiratory and cardiovascular diseases, depression and stress are linked to air and material quality, humidity, sound and heat insulation, and lack of space (WHO. *Health and Thermal Comfort*, 2018). It is therefore interesting to observe how this issue emerges or does not emerge in public debate, and what contribution experts and residents can make.

Public health experts look at habitat

Over the last ten years or so, health researchers have established various indexes of health qualities in the home. In 2020, the French High Council for Public Health (Haut Conseil de la Santé Publique) drew up a "domiscore" grid, to be filled in by occupants with the help of associations, to identify health factors relating to housing, whether they relate to physical protection, apartment surface area, power supply, water access and drainage, sanitary installations, thermal conditions, indoor air quality, environmental nuisances, noise, lighting, and so on. The needs identified relate to physical health, and in part to mental health. They apply particularly well to substandard housing, and are similar to English measures such as the *English Housing Health and Safety Rating System* (2004), European measures such as the *Healthy Homes Barometer (Velux, 2017)* or the WHO's *Housing and environmental quality* index (HEQI, 2019).

The latter, developed by the World Health Organization, is part of the Ottawa Charter signed in 1987 by the same organization to promote vigilant attention to living environments and not just to people's lifestyles. It considers air quality, humidity and mold, pests and allergens, the presence of lead, winter and summer temperature regulation, overcrowding, etc. Applying this grid, researchers have shown that 79% of American households reported "at least one grid item associated with a health problem" (Chu et al., 2022).

The diversity of indexes of this type on an international scale shows the heuristic nature of the health theme, which covers both problems linked to poverty, ageing, working at home... and aspirations such as decent heating, sound quality, absence of pollution, and air quality. These elements are linked to both objective measures and subjective feelings of well-being.

The housing field's questioning of the quality

Nonetheless, they help to temper the statistics on housing conditions, which, according to the criteria established in the post-war period, are generally satisfactory: in France, over 95% of homes are equipped with toilet and sanitary facilities. Even if we know that 4 million people suffer from heating difficulties, overcrowding, defective equipment, and poor construction (Fondation Abbé Pierre, 2023), the financial difficulties of accessing decent housing, the rate of effort required of households and the extent of transport times also correspond to situations of residential vulnerability (Bouillon et al., 2019) affecting people's health. These were exacerbated during the Covid crisis, which highlighted the tightness of housing in metropolitan areas. At that time, two years after the ELAN law, which set out to "build more, better and cheaper", three official reports tackled the subject of housing quality:

- The Lemas/Badia report (2020) focuses on the question of the surface area of social housing, its modularity and adaptability, its luminosity, and its relationship with the exterior.
- The Laurent Girometti and François Leclerq (2021), which supports "a reference framework designed to improve the quality of use of housing to meet the new needs of occupants and restore the desire to live in the city".
- The report by the Institut des Hautes Études pour l'Action dans le Logement IDHEAL (2021) highlights the lack of understanding of uses and lifestyles on the part of designers. Based on an analysis of 200 apartment plans built over the past twenty years, it notes a deterioration in the amount of space available in apartments, particularly in terms of room surface area, open kitchens, and outdoor spaces.

From their proposals, one conclusion emerges: a new picture of housing conditions is needed to gain a better understanding of current housing inequalities, beyond the well-known problem of poor housing. In a context where normative devices have shifted from the state to private initiative, from social housing to home ownership, the field of housing actors is questioning construction and usage standards (Fijalkow, 2019). Although from 2021, following these reports, the government launched a vast call for ideas and experimentation on "the quality of tomorrow's housing" and designated around a hundred winners, health only appears indirectly in these schemes, even when they deal with the "performance" of sound or thermal insulation. Compared with the hygienists' arguments developed in the 19th and 20th centuries, which inspired the modern architecture movement (air, light, density), this distance between the fields

of health and housing deserves to be questioned. The resistance of those involved in housing, including residents, to questioning the quality of housing from the point of view of health is a matter for debate.

Applying health literacy to housing

Indeed, the quality of a home cannot be reduced to its technical dimensions. The WHO concept of health (a feeling of physical and mental well-being) makes it possible to study the effect of housing representations on health. It, therefore, incorporates the possibility for the inhabitant to leave or move (principle of mobility); the principle of adaptability of the dwelling to all ages and life cycles; the principle of identity, which may or may not enable the inhabitant to recognize himself or herself in the place where he or she lives; and the principle of narrativity, which enables the inhabitant to express his or her attachment (Fijalkow, 2017). The qualities expected of the habitat are therefore plural, depending on the social situation. What's more, they are not limited to the interior of the dwelling, and include at the very least the building, the site of numerous negotiations, as we saw during the pandemic. From a narrative perspective, crossing the history of places with the stories of residents and their trajectories, the health dimension helps to develop people's ability to talk about where they live.

In this respect, the concept of “health literacy”, originally developed by Sørensen (2012), involves a series of criteria that an individual may have to identify, understand, and evaluate health-related information, such as knowledge, skill, motivation, and ability. Mastery of these criteria can enable them to make better decisions about what is best for their health and what can lead to disease prevention (Sørensen et al., 2012). The point we seek to develop in this research is how one acts to improve one’s quality of life and, therefore, one’s physical environment and housing. Among the different criteria, the concept of “competence” is of strong interest, since it is the basis of other variables such as “having the ability to evaluate” and applying all this information to prevent diseases (Van den Broucke, 2017), as well as addressing the conditions necessary to have a healthier habitat. In a broad sense, we suggest that “care” can be seen as a generic activity that includes everything we do to maintain, perpetuate and repair our 'world' in order to live in it as best as possible. This world includes our bodies, ourselves, and our environment, all of which we seek to link into a complex, life-supporting network" (Tronto, 2015). Thus, we can ask: what skills do residents have to make the connection between their heating difficulties and health problems, and what are their capacities to intervene and improve their habitat? Can they fight autonomously against the energy difficulties they are confronted with? Do they consider it as an individual or collective activity? What are the risks for their health and the external variables that could influence their decision-making? Is it the cost of these actions, the lack of knowledge of public or technical aids, the judgment of the neighbors concerning these actions that …

This type of issue was documented by Harrington’s team in 2005. They noted that, according to socially mediated processes, “poorer health” can lead to a decline in the economic status of the individual (Harrington et al., 2005). They analyzed how living in an energy-precarious household and a low socioeconomic status directly influences people’s mental health. Among the results, they identified objective conditions that directly impact people’s well-being, such as decent heating, air quality, or ventilation (Zúñiga-Bello et al., 2019). For example, there is a relationship between the cooling of the body and the ability to close a window properly, whether the issue is controllable by the person or a technical problem. This “ability to control” one’s

domestic environment clearly influences mental health. Similarly, people who cannot control the heat in their homes are more likely to become ill, as low temperatures in apartments increase humidity and therefore indoor pollution (mold and dust mites, among others) in addition to more traditional illnesses such as flu or asthma. Among the subjective variables lies personal and emotional control, on top of material conditions, such as lighting or sound quality (Bluyssen, 2010), which increase the likelihood of "feeling capable" of controlling a healthy space and having a more sustainable quality of life. Finally, these objective and subjective measures of housing quality require the integration of residential trajectories and, more broadly, the history of apartment occupancy, which is fundamental for the analysis of energy consumption and spatial occupation (Shove, 2003). Stress, anxiety, insecurity and the accumulation of several unhealthy factors in housing can lead to suicidal thoughts (Colleville & Kermarec, 2021). The notion of subjectivation can be considered in the field of mental health as a set of social processes that reinforce the subject's point of view, as opposed to the importance attributed to more "objective" elements, of a physical or social nature (Benamouzig, 2011).

SAPHIR[1]: a narrative research methodology involving local residents

This research program, supported by the *Agence Régionale de Sante Île-de-France*, aims to answer these questions. It is based on a sample of 12 buildings in eastern Paris and its northeastern suburbs, according to year of construction (and therefore of compliance with standards, particularly thermal and acoustic), physical density, location in the city, access to services, occupancy status (condominiums, social housing) and population type (age and income brackets).

Figure 1 Workshops and posters produced, interaction with the inhabitants.

[1] SAPHIR, Santé Habitat Paris Histoires Résidentielles : (Health Habitat Paris Residential Stories)

The final objective is to produce a series of building monographs reconstructing the history and collective memory of these buildings, based on archives and interviews, and questioning the way in which this past does, or does not, play a part in the crises encountered (Covid, energy...).

In the first phase, we offer "educational cafés" for residents, using a didactic poster to explain the impact of housing quality on residents' physical and mental health. The aim is to raise residents' awareness of these issues by mobilizing them as voluntary participants in the survey. The aim is to develop their literacy.

Note: In this research, we observed at some point a lack of understanding on the part of the interviewees when we asked about the possible effects of housing on health. That is, people do not necessarily "understand" or are "aware" of the relationship between the problems encountered in housing and/or the possibility of controlling external variables: bad odors, unpleasant noises, humidity, cold or heat, among others, and the repercussions of these variables on mental and physical health. This is why at a certain point in this research we had to adapt our methodology in order to increase the "literacy" of the inhabitants.

Figure 2 A0 poster prepared for cafés pedagogies, SAPHIR, 2023

The second phase consists of individual interviews, asking residents about health and well-being in their homes, their residential trajectories, and life in the building and neighborhood. They are asked to take photos of their apartment, to draw up a "living survey", i.e. a map of the layout and location of objects and furniture. This survey illustrates the density of occupancy and multi-functionality of rooms.

The interviews are summarized in "stake-place" cards, which are the areas of tension described in the interviews. The notion of stakes is similar to that of sensitive spaces, or even intersecting lines (Ingold, 2011). They emerge in one building and not in another, and can be windows, courtyards, window boxes, apartment corridors, elevators...

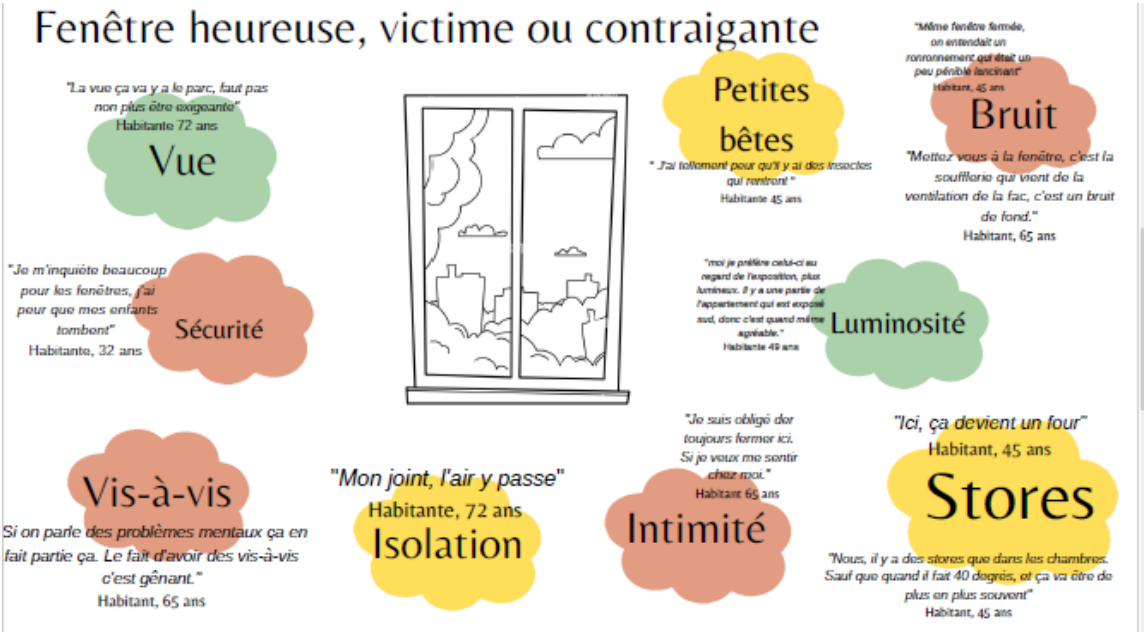

Figure 3 Restitution sheet of a "stake-place" sheet presented to residents with interview excerpts, Focus Group, 2023

Focus Groups are held in each building. These meetings are used to draw up a collective diagnosis and assessment of the quality of housing in terms of health. These are inserted into the history of the building and its residents: plans of the building, the apartments and their reorganization by the residents are mobilized.

Figure 4 Focus Group in Paris, 2023

Conclusions

While a building is built by materials and people, it is also the result of a history, from its construction to its daily maintenance (or degradation). This situation presents a panorama of the new social crisis of the 21st century in France because the housing sector is one of the most affected, it generates difficulties both in the monthly payments of electricity by tenants and in the thermal insulation works to be carried out in the buildings or apartments by the owners. These variables generate discontent, bad mood, mental stress, anxiety, and depression.

If health in housing is struggling to get onto the public agenda, despite alarming figures, the SAPHIR program proposes a methodology to enable residents to question the quality of their housing through their health concerns. Health issues can be used to address new aspects of housing quality and to better document situations of inequality. However, the question remains open to those involved - builders, developers, and managers.

This research and methodology are based on "literacy in health and housing". We observed that working on the reading of institutional or technical documents on various components of the dwelling allows the inhabitants to better make the link between the living space and the impact on their well-being. This can be oriented to the understanding of the reading of an electricity bill and on the type of heating of the house, or for example, to improve the ventilation of their apartment with the understanding of the shape of their apartment with the plans made during the research. We have been able to observe how the inhabitants say they feel more "capable" or with more "tools" to understand and solve some problems related to their health, having increased their literacy allows them to identify certain paths and motivates them to generate other actions. This has allowed us to better orient them on the types of financial and health assistance they could claim according to the difficulties encountered during the workshops or individual interviews.

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