Neighbourhood Socioeconomic Processes and Dynamics and Healthy Ageing

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Elderly citizens are concentrated in urban areas and are particularly affected by the immediate residential environment. Cities are unequal and segregated places, where there is an intensification of urban change processes such as gentrification and displacement. Since older adults spend most of their time in their nearby neighbourhood environment due to physical, emotional, and financial reasons, it is essential to understand how the neighbourhood environment affects this population's health.

▌ 1. Neighbourhood Socioeconomic Processes and Dynamics

Ross and Mirowsky define neighbourhood socioeconomic status (also called neighbourhood socioeconomic deprivation) as "inequality in the distribution of valued goods, resources, prosperity, and opportunity" at the macro-level [1]. These authors include three main characteristics in their definition: education, work, and economic resources. For example, the levels of education in a neighbourhood might dictate how people can express their interests by negotiating, finding and using the necessary information to improve the conditions of their neighbourhood. In addition, the number of people in a neighbourhood who are employed may settle order in the residential area. Furthermore, the levels of poverty and home ownership might dictate the economic resources of a neighbourhood. Having wealthier residents and more homeowners in the neighbourhood may create more concern for preserving and investing in the area, favouring interest in the region and, consequently, increasing its perceived quality [1]. The combination of these three dimensions is typically used to measure neighbourhood socioeconomic deprivation.

Multiple multivariate indexes are used to measure neighbourhood socioeconomic deprivation, such as the Townsend deprivation index, Carstairs deprivation index, and the Jarman or underprivileged area (UPA) score [2]. Notably, most high-income countries have their own deprivation index versions to measure deprivation in their country [3][4][5][6]. Nevertheless, generally, neighbourhood deprivation includes a composite of area aggregated measures such as the proportion of unemployed, blue-collar workers, and less educated people overall in a geographical area [2].

Neighbourhood segregation is another social feature deemed "essential" for discussion. Neighbourhood segregation is a complex process caused by the geographic separation of groups of people based on specific characteristics: organised discrimination, economic means, and individually motivated reasons [7]. In 1970, the Duncans created the dissimilarity index [8] to measure this social process. The dissimilarity index is the most frequently used measure of segregation, although nowadays, segregation is measured with multiple indexes. Overall, each of these indices try to include five dimensions of segregation: evenness (to adjust for composition), exposure (to adjust for isolation, interaction, and correlation), concentration (to adjust for the distribution of a group concerning population densities), centralisation (to adjust for closeness to the city centre), and clustering (to adjust for relative spatial proximity) [9].

According to Schelling's tipping model, segregation can be accentuated if a previously installed group has a compositional preference in the neighbourhood. Supposing that new individuals with different characteristics move in, the initial residents may show a desire to relocate to another area. If the minority group entering the neighbourhood exceeds the tipping point for previous locals, a transitional phase for the neighbourhood may begin [7]. As the composition of the residing population changes, so does the neighbourhood environment. The socioeconomic characteristics of a population, such as the level of education, income, occupation, fertility rates, female labour force participation, housing choice, language, physiognomy, citizen involvement in community activities, religious beliefs and practices, will affect the dynamics of a neighbourhood [10]. Thus, the socioeconomic structure of a neighbourhood is not static. The mobility flow of residents of different socioeconomic classes can alter the social structure and, consequently, the dynamics of neighbourhoods.

The interplay of these characteristics reflects how neighbourhoods work. With the arrival of new dwellers, the current environment might be altered, giving rise to the so-called invasion-succession model. This model is "a theoretical construct, setting out the sequence of competitive social actions by which a human group or social activity comes to occupy and dominate a territory, formerly dominated by another group or activity." [11]. When new individuals with other characteristics "invade" the neighbourhood, natural processes of competition for the available resources may occur. Additionally, the different views of land use or community activities might introduce some conflict between the new residents and the pre-established population. Consequently, if none of the "new" or "old" residents come to terms with each other, then one of them will eventually withdraw. If the established population prevails, then the "invasion" will be hindered, and if the newcomers dominate, then "succession" will be accomplished, and replacement of a previous well-established social group will be initiated [10].

Hence, it is perfectly natural that neighbourhoods go through some changes. In 1959, Hoover and Vernon proposed a five-stage neighbourhood life cycle model to explain the phases neighbourhoods undergo: development, transition, downgrading, thinning out, and renewal. However, it does not mean that every area will pass through all stages of growth and decline. Some may remain in a stage indefinitely, and others may rotate through several stages without necessarily going through all five of them. The transition from one stage to another will change the characteristics of residents, namely, the population density and distribution by age, race, and social status; land and dwelling use; and housing type and conditions [10].

For instance, gentrification is a transitional process where low-income neighbourhoods are modified socially—by changing the composition (e.g., level of education, income, and racial makeup) of the inhabitants—and economically, by having more extensive real estate investment [12]. Renovations in these areas, such as investments in transport and public parks, attract new residents with higher purchasing power. Any changes in land use are tailored to the new type of resident. As a result, landlords will look for a profit with these new higher-paying tenants. In return, long-term residents will notice a change in the neighbourhood's character, and might be displaced by rent increases, evictions, and other displacement pressures as a consequence [13][14]. In fact, the previously established population may not take advantage of the new amenities. Instead, they might have to move to areas outside of their original community, placing them further away from their jobs and their family and friends, so they start to feel out of place. For the people that can afford to stay in the neighbourhood, a sense of their community may be lost. Small family businesses might also begin to disappear as their clients migrate or commercial rents are no longer affordable [12].

Another innate neighbourhood process is "filtering" due to the natural physical deterioration of housing conditions over time in the absence of proper maintenance. This process might induce higher-income individuals to seek better housing conditions and relocate to other areas [15]. As a result, lower-income people can reoccupy these areas as they become cheaper and improve their situation compared to their previous housing. However, it is important to note that these people will still be living in inadequate conditions. Creating local urban renewal programs designed to solve urban deterioration, including housing, physical infrastructure, and community services [16], might help fight the vicious cycle of poverty and inequities. The revitalisation of decaying areas with interventions such as creating or reforming public spaces, parks, and community centres can also provide better conditions for greater overall well-being. However, urban renewal programs can also lead to negative aspects related to social network disruptions, the closure of long-time establishments, and feelings of insecurity in the new environment. Another crucial aspect to consider is that an area's renovation might alter housing prices and the overarching lifestyle that could attract newcomers to gradually generate a process of gentrification [17]. Therefore, when analysing these interventions, one should be cautious of initiating social exclusion and displacing the most vulnerable residents.

2. Mechanisms Connecting Neighbourhood Structure and Dynamics and Healthy Ageing

How are social exposures connected to the mechanisms involved in the pathways of neighbourhood effects on health? According to George C. Galster, four main mechanisms explain this connection: socio-interactive, environmental, geographical, and institutional [18].

Amongst the social-interactive mechanisms [19][20], there are:

- processes of influence by neighbours (social contagion) where people change their behaviours, aspirations, and attitudes based on contact with their peers;

- processes of adhering to local social norms (collective socialisation) through neighbourhood role models or social pressures;

- processes of transmission of information or resources (social networks) through neighbour networks;

- processes of influence in the behaviour of residents through a degree of social disorder (social cohesion and control) changing also psychological reactions;

- processes of competition due to limited resources in the neighbourhood;

- processes of relative deprivation where people tend to feel inferior to their neighbourhood peers that have reached a higher socioeconomic position;

- and finally, the process of parental mediation where the actions of parents are influenced by the environment of the neighbourhood and, therefore, affect the way they raise their children [18].

A longitudinal analysis conducted in Germany verified that social cohesion had a mediation effect on neighbourhood environmental/built characteristics and the health of older adults, especially their physical health [21]. The authors demonstrated that social cohesion was a predictor of mental and physical health. Another longitudinal study conducted in Japan also observed that community social networks might promote participation in social activities, which in turn, might support the adaptation to a healthier diet, particularly for the elderly living alone [22].

Regarding the environmental mechanisms [23][24][25], these processes might affect individuals directly through psychological effects without necessarily changing their behaviours. When there is exposure to violence, a sense of danger may compromise the well-being of individuals. When the physical surroundings are unpleasant, residents might feel helpless and stressed. Furthermore, when there is toxic exposure to pollutants in the air, soil, or water, the health of residents will certainly be conditioned [18]. A study conducted in the United States found that higher levels of neighbourhood violence were associated with higher depressive symptoms in older adults [26]. Moreover, in a cross-sectional analysis, elderly people living in American neighbourhoods with higher exposure to fine particulate matter air pollution had worse cognitive function than their peers exposed to lower levels of air pollutants [27].

The geographical mechanisms have two main processes: spatial mismatch, when there are no appropriate opportunities for the residents' skills; and public services, which might be restricted in a specific area, limiting the health, education, and development of residents. In other words, opportunities are limited based merely on the location of the neighbourhood [18]. For example, in China, unmet service needs felt by the elderly negatively affected their life satisfaction [28].

Lastly, the institutional mechanisms [29][30] are characterised by powerful third parties that influence residents' lives. There is the process of stigmatisation, where certain neighbourhoods entail harmful stereotypes that can limit favourable options for the residents. Furthermore, local institutional resources and local market actors may influence access to certain services and stir up certain behaviours, respectively [18]. For instance, in the state of Pennsylvania, in the United States of America, older adults living in a neighbourhood with the highest tertile of amenity diversity had greater mobility than those who spent most of their time in their residential area [31].

Based on these mechanisms, it is not difficult to recognise that healthy surroundings are crucial for having better opportunities to thrive in life. Thus, the neighbourhood environment is central in people's lives, particularly for the ageing population, since they are often restricted to their nearby neighbourhood environment and, therefore, more vulnerable to it.

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