Urban fall traps
Armadilhas do espaço urbano

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ABSTRACT

Objectives: To evaluate the repercussion of falls in the elderly people who live in the city of São Paulo and address - though synthetically - some questions regarding the city and its relation to aging and the quality of life of the elderly. Methods: This is a qualitative study. As for data collection, “in-depth individual interviews” were applied. Selection of subjects was guided by a procedure named as “network”. Results: Ten interviews were performed, nine with elderly individuals who were victims of falls and one with a public authority representative. Data resulting from interviews confirmed that significant changes occur in live of the elderly, who are victims of what has been called “urban traps”, and that, by extrapolating mobility and dependence contexts, invade feelings, emotions and desires. The inappropriate environment provided by the city of São Paulo is confirmed by absence of adequate urban planning and lack of commitment of public authorities. It also revealed that the particular way of being old and living an elderly life, in addition to right to citizenship, is reflected by major or lesser difficulties imposed to the elderly to fight for their rights and have their public space respected. Conclusion: The city of São Paulo is not an ideal locus for an older person to live in. To the traps that are found in public places one can add those that are found in private places and that contribute to the hard experience of falls among the elderly, an experience that is sometimes fatal. In Brazil, the attention is basically focused on the consequences of falls and not on prevention, by means of urban planning that should meet the needs of the most vulnerable groups - the physically disabled and the elderly.

Keywords: City; Urban space; Public space; Fall; Elderly

RESUMO

Objetivo: Explorar as repercussões da queda em idosos residentes na cidade de São Paulo e desenvolver, ainda que sinteticamente, questões associadas à cidade e à sua relação com o envelhecimento e a qualidade de vida dos idosos. Métodos: Trata-se de trabalho com abordagem qualitativa. Para a obtenção de dados, optou-se pela técnica da “entrevista individual em profundidade”. A escolha dos sujeitos foi guiada por um procedimento de “rede”. Resultados: Foram realizadas dez entrevistas, nove com idosos vítimas de quedas e uma com o representante do poder público. Das entrevistas resultaram dados que confirmam mudanças expressivas na vida dos idosos que são vítimas do que se passou a denominar de “armadilhas urbanas” e que, extrapolando os âmbitos da mobilidade e da dependência, invadem sentimentos, emoções e desejos. O despreparo da cidade de São Paulo confirmou-se na ausência de planejamentos urbanos adequados e no descompromisso do poder público. Revelou ainda que o modo singular e diferente de ser e viver a velhice, ao lado do direito a exercer a cidadania, reflete-se na maior ou menor dificuldade dos idosos lutarem por seus direitos e terem seus espaços respeitados. Conclusão: São Paulo não se apresenta como locus ideal de vida para a velhice. Às ciladas presentes no espaço público somam-se as que, existentes nos espaços privados, também contribuem para a dura experiência de quedas entre idosos, experiência com conseqüências muitas vezes fatais. No Brasil as atenções recaem, basicamente, sobre as conseqüências das quedas, não sobre a prevenção das mesmas, por meio de um planejamento urbano que atenda às necessidades de grupos mais vulneráveis – deficientes físicos e idosos.

Descritores: Cidade; Espaço urbano; Espaço público; Queda; Idoso

INTRODUCTION

Brazil has nowadays approximately 17,662,715 elderly people, who account for 9.7% of the population(1). The demographic census in the year 2000 recorded 14,536,029 people aged 60 years or older, corresponding to 8.6% of the total Brazilian population, as compared to 10,722,705, or 7.3%, in 1991(2).

Although the population aging is a recent fact in this country, the Brazilian elderly population is one of the largest in the world in absolute numbers. Within a couple of years it may surpass 30 million people.

Population aging is accompanied by another fact: longevity, i.e., the increase in the number of years lived as an elderly person. In the last decades, life expectancy has increased more than in the previous five thousand years.
According to UN forecasts, in 2025, the individuals in their 60’s will surpass the number of young people aged under 15 years; the number of people reaching 100 years of age will be 16 times higher than the number currently recorded and the population over 80 years old will increase six fold.

This “new” reality points to the urge for transformations in the diverse segments of society, which shall have to reorganize itself in such a way to become a “society for all ages”. In broader terms, it imposes in the first place the adoption of measures to overcome the current state of marginalization and exclusion suffered by a significant number of elderly individuals.

The main objective of programs for protection and social inclusion is to offer the possibility of the elderly years lived under new contents and with a high level of satisfaction and personal achievement.

However, what we see is that our society, when relating the increase of age to the capacity to generate income, leads to the loss of social status and to several forms of negative discrimination; therefore, it induces the elderly to adopt an attitude of resignation and marginalization. Aging, therefore, becomes a synonym of discrimination, loss of social prestige, and disability.

The fact is that we are not prepared for being aged; we are prepared only for adult life and for work. And work is the first thing taken away from us when we get old.

In Brazil, out of the countless challenges faced on a daily basis by the elderly, one particularly stands out. We are talking about the lack of city planning. Reproducing a more general pattern and one directly related to the model of production in force, our cities have been designed for a work-oriented population, for production and consumption of goods by the young and adult populations; this is the model into which elder people need to adjust themselves. These considerations apply especially to large cities and metropolitan areas, such as São Paulo.

Data released by the IBGE (Brazilian Institute of Geography and Statistics) on July 1st, 2006(3), show that the population of São Paulo City (11,016,703) had 10.1% of elderly - a percentage that places this city in the 5th position in the ranking of Brazilian cities having the highest number of elderly.

Among us, the population aging is accompanied by numerous social and urban issues; these issues, though not limited to the elderly, are overrated. Some of them include health, unemployment, public transportation system, housing, environment, public degradation and violence issues.

The lack of planning and the disorganized growth of cities through the years caused the disappearance of several urban spaces which were replaced by bus terminals or concrete islands.

We can say that the city of São Paulo in this new millennium has become a city with problems that are proportional to its enormous size.

As a privileged economical, social and cultural center, São Paulo hides numerous “traps”, especially for the elderly who walk in the streets with much difficulty; these citizens routinely run the risk of falls. Some of the most common consequences of fall episodes include the loss of self-confidence, fear, some more severe sequels or even death.

There is no doubt the city needs to adjust the public spaces for leisure and circulation, the sidewalks and public transportation in a way to guarantee the access of the elderly, because there are situations that are unfeasible for aged individuals to go and accomplish a number of activities, even the simplest ones. By and large, what we see is total impossibility of these people to go back and forth, to move around either while looking for a job, health services or leisure.

To us, what is a right becomes a great “trap”: staircases without handrails, slippery floors, damaged and uneven sidewalks (if not “invaded” by parked cars), public buildings and tourist attractions of difficult access. Our city is full of architectural and urban barriers.

This reveals one of the most perverse faces of our urban centers – even those planned. It relates to several obstacles that are present every day, such as high steps on buses (which are unreasonable even to younger citizens), timing of traffic lights and uneven sidewalks. These are just a few examples of facts and situations neglected by public authorities.

As an example, we would like to remind that people often have to run to be able to cross a street due to the short time allowed by the traffic light. According to the Brazilian Association of Pedestrians (ABRASPE – acronym in Portuguese), whose mission is to fight for the pedestrian rights, especially of those most fragile, in order not to hinder the traffic flow in São Paulo City, pedestrians have to cross the streets walking at 1.2 meters per second(4), whereas the ideal situation for elderly people would be less than one meter per second(5-11). Therefore, it seems that transit authorities worry more about traffic than about pedestrians’ lives.

If elderly years and longevity pose a new problem to be tackled, it is important to provide the aged the first and most fundamental human right, among others, “the right to have a right”, as Arendt(12) expressed very well.

Old age is a multidimensional phenomenon that reaches - with major differences - the body and mind of the individuals. In each person, the course of changes follows its own singular pattern. However, it is possible to point some biological, physiological, anatomical and morphological aspects that are associated with the aging process and predispose the elderly to the risk of falls(13-21) (chart 1).
Most “accidental” falls are caused by one factor or a group of factors that interact with the urban space “traps”.

As extrinsic factors we have to consider, in addition to the environment, medications that may increase the risk of falls (antihypertensive agents, diuretics, psychotropic drugs)\(^\text{22-26}\) besides drug interactions, poorly adjusted orthoses and inappropriate shoes.

The consequences of a fall may vary from a single injury to soft tissues causing pain or fracture to a more severe injury, such as a subdural hematoma requiring hospitalization and all problems related to immobilization and iatrogenic risks\(^\text{27-29}\).

Immobilization may result from the injury itself or it may be aggravated by the fear of falling again, lack of self-confidence and walking restrictions.

Regardless of the causes that can lead to immobility, the consequences are always severe - ranging from disability, loss of quality of life and dependence, to hospitalization, institutionalization and death (figure 1).

In the context of the reflections above lies the core problem of the investigation we carried out. We try to identify the repercussions of falls in the life of elderly people living in São Paulo City.

**OBJECTIVE**

To obtain data about the repercussions of falls in the elderly living in São Paulo City and to address, even if synthetically, some topics associated with the city and their relation with aging and quality of life of the elderly population.

**METHODS**

Because it is based on the context of personal histories and involves the rich field of meanings attributed by people to life events (extraordinary, in cases of falls), the methodological option was practically a qualitative approach. However, the quantitative methodology was equally used. Through it, empiric information and data were searched. They were diversely situated, contributed to a better delimitation of the investigated problem. Therefore, more general indicators on the elderly that would fit the category of “victims of urban traps” were sought.

Nonetheless, we must emphasize the absence of data in medical records and even in a non-governmental organization (NGO), about urban risks and causes of falls. As to the NGO, the only concern was more with urban traps than victims. These “absences” greatly hampered collection of quantitative data.

As to qualitative methodology, the procedure used for data collection was the in-depth individual interview, which is a widely used technique currently used among researchers in different fields of knowledge (including health).

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**Chart 1. Intrinsic factors predisposing falls**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Related factors</th>
<th>Aggravating factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>Changes in collagen and elastin = connective tissue stiffness</td>
<td>Immobility, osteoporosis</td>
</tr>
<tr>
<td></td>
<td>Decreased hyaluronic acid = decreased cartilage thickness</td>
<td></td>
</tr>
<tr>
<td>2. Changes in mobility</td>
<td>They may be related to loss of muscle strength, reduced ROM (range of motion), shortening, deformity</td>
<td>Rest, no frequent use, immobilization, joint alterations: arthritis, osteoarthritis</td>
</tr>
<tr>
<td>3. Loss of muscle strength</td>
<td>Decreased nerve excitation, change in muscular fibers in the elderly, lean mass loss</td>
<td>Immobility, malnutrition</td>
</tr>
<tr>
<td>4. Postural instability, loss of balance</td>
<td>Reduced proprioception, slower reflexes, decreased tonus, orthostatic hypotension</td>
<td>Pathological conditions: metabolic, cardiac alterations, anemia, medications, drug interaction</td>
</tr>
<tr>
<td>5. Sensory changes</td>
<td>Vision</td>
<td>Ignore these alterations</td>
</tr>
<tr>
<td></td>
<td>Hearing</td>
<td>Pathological conditions: peripheral neuropathies, degenerative diseases, dementias, Parkinson’s disease. Fractures, falls, foot deformities</td>
</tr>
<tr>
<td>6. Impaired gait (symmetry, speed)</td>
<td>Slow gait, short, irregular steps</td>
<td>Pathological conditions: peripheral neuropathies, degenerative diseases, dementias, Parkinson’s disease. Fractures, falls, foot deformities</td>
</tr>
</tbody>
</table>

Note: We can not disregard cognitive disorders such as anxiety, depression, dementia and denying frailty, which are closely related to problems of falls in elderly people.

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**Figure 1. Consequences of falls**

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According to Simoni et al., the methodological choice should be based on the nature of the problem to be studied and on an analysis of the reality in each research; only the qualitative approach enables understanding all that remits to intelligibility of meanings attributed to actions and life experiences. The meaning is the main concern of the qualitative approach.\(^{30}\)

As such, if in the quantitative data the subjects remained “invisible” (hidden behind indicators and empirical data), in interviews they gained “body and soul”, becoming visible and with audible voices. In these voices, by means of attentive and careful listening, lives cut short by different accidents were brought to attention; in summary, episodes that gained specific content and meaning.

The selection of subjects followed the methodological procedure defined as a “network”. Through this procedure, the first subject selected at hospital or indicated by people who know elderly individuals in this condition, indicated a subject who, in turn, did likewise and indicated another subject.

With the purpose of obtaining information about the city and its relationship with aging and quality of life, we also interviewed a representative of the public authorities directly involved with environmental issues and urban planning. A pre-established script served as the guide for the interviews (annex 1). When the interviews were carried out, we sought to establish a relationship of confidence, spontaneity and freedom of expression. The purpose was to allow a favorable environment to free exercise of narration. Ten interviews were conducted - nine with elderly who suffered falls and one with the public authority representative.

### RESULTS

In the research presented here, while the personal idiosyncrasies may have their importance, some aspects were recurrent in the responses obtained: on one hand, all subjects had a very active life before the fall; on the other hand, they had the desire and satisfaction to feel active, to make achievements and not to see old age as a stage of life marked only by losses. At the same time, everybody felt guilty, even if partially, for the fall they suffered, but they “knew” they had fallen in the city traps. These individuals were aware they were “victims”. To all interviewees the fall was a “landmark” in their lives, since it resulted in several complications, some of them with irreversible sequels.

Three of the interviewees presented complications after the fracture; two of them underwent more than one surgery and one did not go back to a normal life because recovery was not complete.

Regardless of the socioeconomic level, all interviewees said that São Paulo has changed much; it became an aggressive and abandoned city, a city that does not promote get-togethers, but rather draws people away and isolates them. They recalled and missed the city when they were young, and all agreed, with no exception, that the price paid for progress is too high. Violence, lack of security and fear were present in everybody’s words. To them, aging in São Paulo is a synonym of exclusion.

Another recurrent fact was resentment against authorities regarding their disrespect for rights of the elderly which have long been established. This feeling is more strongly expressed in relation to retirement. They also reported the disdain and disrespect they are treated by bus drivers.

Another aspect approached by the interviewees was family. According to them, dependence caused by one fall episode can strain family relationships and bonds. The stronger these bonds, the milder is the “burden” of individual disabilities. Therefore, a fall imposes what is learned as an inversion of roles: from caretaker to becoming taken care of.

### DISCUSSION

The initial search for data that would reliably lead to the elderly who are victims of the urban “traps” and, as an extension, to the relation between the city of São Paulo and the life conditions and mobility of these individuals, resulted in “flesh and bone” elderly people; individuals who saw their lives changing, several times in a drastic manner, due to the falls they suffered.

Not disregarding the existence of factors that, intrinsic to the aging process, favor episodes of falls, the environmental factors different from those inherent to aging process, decisively contribute to occurrence of falls in the old-aged.

Furthermore, the elderly people are more vulnerable to traumas, have a reduced ability to recovery, remain at hospital for longer periods with more severe injuries and present significantly higher mortality rates than younger patients.\(^{31-34}\)

Unfortunately, São Paulo does not represent an ideal place to live during old age.\(^{35}\). Whenever possible, it would be better to have in mind the different needs of citizens who live and work there. For the elderly, all safety and accessibility requirements would end up generating comfort in the different stages of life.

In the end, we can conclude that, before requiring the participation of all citizens in the services and equipment
offered by the city, we should examine if this participation will be possible, if all means to make this happen are present in the urban structure, if buildings and open spaces contemplate durability, functionality, esthetics, accessibility and habitability, in such a way as to respect the peculiar needs of elderly people and, at the same time, to foster solidarity attitudes in the general population.

We are still far from understanding all consequences of longevity in modern society. However, we are about the need of articulation and dialogue between the civil society, government and social movements towards revitalization of community life and readjustment of the urban design; in sum, a dialogue based on the diligence to improve life conditions of the population as a whole, and specifically of the elderly.

Nobody plans for the old age. We spend our whole life making plans for the future but we postpone considering aging.

CONCLUSION

São Paulo does not represent an ideal place to live during old age. The traps present in the public space are added by those present in private spaces, which also contribute to the hard experience of falls among elderly people, which sometimes can have a fatal outcome.

In Brazil, the attention is basically focused on the consequences of falls instead of their prevention through urban planning that meets the need of the most vulnerable groups – physically disabled people and elderly people.

REFERENCES


ANNEX 1

Interview Script

| Name (initials): |
| Age: |
| Occupation: |
| Sex: |
| 1) Tell me a little bit about your life. Your daily routine... |
| 2) How did the fall happen? |
| 3) Do you think that any factors inherent to aging contributed to the fall in your case? |
| 4) Was it necessary to stay at hospital? If yes, for how long? |
| 5) Was immobilization necessary and for how long? |
| 6) Was surgery necessary? |
| 7) Did you have any complications associated with hospitalization? |
| 8) Was there any change in your life after the fall? |
| 9) Were you able to resume your “normal, active” life? How long did it happen after the fall? |
| 10) Was it necessary to undergo a new surgery? |
| 11) How is the city of São Paulo from the point of view of those who are aging? |
| 12) What would you change in the city of São Paulo? |
| 13) What has the city of São Paulo lost with development? |
| 14) What does it mean to you to get old in a large city? Which are the strengths and weaknesses? |