Condominiums for the elderly: living conditions and health of residents in a new form of housing

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Abstract

The aim of the present study was to describe and compare the sociodemographic and health characteristics of residents in a Condominium for the Elderly facility and elderly persons living in the community. A cross-sectional study of 223 elderly persons was performed. Data was collected from November 2011 to February 2012, using the BOAS questionnaire (section I and III). In terms of sociodemographic characteristics, there were significant differences between the two groups of elderly persons for educational level and marital status. Living in the condominium was associated with the need to replace dentures and physiotherapy, whereas living in the community was associated with satisfaction with medical services and undergoing medical exams. Identification of the problems of this new housing policy is an important tool for planning comprehensive care for low-income elderly persons.

Key words: Aging; Health of the Elderly; Nursing.

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INTRODUCTION

The study of the complexity of aging in Brazil and its implications and characteristics is of growing importance due to the significant demographic and population age structure changes that the country is experiencing, caused by a decline in birth and mortality rates during the twentieth century.[1] In such a context, the creation of government policies aimed at seniors, together with guaranteed access to good quality health services, represent a new challenge for the planning of health care for seniors.[2]

One of the government policies that benefit seniors is the Condominium for Seniors, a new form of housing for seniors, which aims to guarantee the right to housing, especially for those in at risk situations.[3] In contrast to nursing homes, residents of such condominiums are independent, pay rent, and are free to come and go as they please, managing the condominium on a collective basis by forming management commissions.[4]

While such housing has long existed in other parts of the world, especially in Europe, condominiums for seniors are rare in Brazil. As a result there is a lack of studies of the health conditions of the residents of these facilities.

Information about health is essential for healthcare planning, monitoring and management, notably in terms of changes in epidemiological patterns, expansion of concepts of health and disease, and the incorporation of health promotion activities.[5]

It has been established that their specific health characteristics mean that seniors require careful and continuous assessment by health care professionals. Studies of the health and socio-demographic profile of this age group are therefore extremely important, as they can help identify the underlying problems of health complaints.[6] As this form of housing is not widely known in Brazil,[4] understanding the living conditions and health of residents of these condominiums is important in order to identify failings and support proposals that contribute to maintaining the quality of life of seniors, and the consequent success of this form of housing. Besides, when comparing the results, it is intended to identify influent factors in the access to health services and include them in the condominium coordination plan, in order to offer support for the professionals to assist the residents in the available service networks.

The aim of the present study was therefore to describe and compare the sociodemographic and health characteristics of residents of a Condominium for Seniors with seniors in the community.

METHOD

A quantitative cross-sectional study was performed of seniors in Maringá, in the state of Parana. Although some strategies are used aiming at promoting healthy aging, such as the construction of open air gyms in the city, there is still few strategies related to the living conditions of low-income elderly population.

There are also ten long-stay shelters, three day centers, 31 community centers and a condominium for seniors, which opened in August 2010 and is home to 50 residents.

The study population was divided into two groups: G1, which comprised all the seniors living in the Condominium for Seniors (50) and G2, composed by a sample of community seniors (180), which was calculated as the triple of G1 sample, increased by 20% because of possible losses.

To form G2, the neighborhood where the seniors in G1 had lived before moving to the condominium and the referring Basic Health Unit (BHU) were identified. It was noted that the seniors were from neighborhoods served by 23 BHUs located in the urban area of the municipality. Once the place of residence of each senior before his or her move to the condominium was established, the number of seniors living in

the catchment area of each BHU located in the urban area of the municipality was defined.

In order to define community seniors (G2) who would participate, it was made a proportional random drawing using a list of registered elders, acquired with BHU directors.

The following inclusion criteria were adopted: seniors must have age of 60 years old or more and have achieved a minimum cognitive assessment score of 13 using the Mini Mental State Examination (MMSE). Of the 180 seniors from the community, 173 were included in the study, as five refused to participate and two failed to achieve the minimum MMSE score. Therefore, a total of 223 older adults (G1 and G2) participated in the study.

It should be noted that the Condominium for Seniors in Maringá is located in an area not served or covered by the Family Health Strategy (FHS), and as a result the older individuals in G1 did not have an FHS team to treat their health needs.

Data was collected from November 2011 to February 2012, through interviews using the BOAS (Brazil Old Age Schedule),[7] multidimensional questionnaire, validated in Brazil by Dr. Renato Veras. This covers various areas of the lives of seniors, and comprises nine sections which aim to gather information about the main characteristics, needs and problems of the older population. For the present study, it was decided to use Section I (comprised of 10 questions relating to the sociodemographic characteristics of seniors) and Section III (which features 15 questions related to the knowledge of, right to, use of and level of satisfaction with healthcare services).[7] The average length of the interviews was 45 minutes.

The results obtained were collated in an Excel spreadsheet, and were entered by one of the authors using the double entry technique, verifying consistency between fields. In case of inconsistency, the spreadsheet was checked against the raw data.

Data was analyzed with the Statistica program using the Chi-squared or Fisher's Exact tests to identify the association between variables. Where statistical association was present, residual analysis was used to reveal the characteristic patterns of each classification category, according to an excess or lack of occurrences, allowing conclusions to be drawn about the significance of associations. A positive residual value greater than 1.96 was required for an excess of occurrences. Differences between the groups were considered significant at $p<0.05$. A confidence interval of 95% and a significance level of 5% were adopted for all analyses.

The study was performed in accordance with the guidelines of Health Department Resolution 196/96 and the project was approved by the Standing Human Research Ethics Committee of the Universidade Estadual de Maringá (Registration nº. 709\2011). All the participants signed two copies of a Free and Informed Consent Form.

RESULTS

As can be seen in Table 1, a number of the sociodemographic characteristics of seniors in Group 1 were similar to those in Group 2: a predominance of females (62% and 69.3%, respectively), a monthly income of up to one monthly minimum salary (90% and 78%), and the fact that the seniors followed the Catholic religion (68% and 75%). In terms of age group, 44% of seniors in Group 1 were aged between 70 and 79 years, while 42.2% of Group 2 were aged from 60 to 69 years, although this difference was not significant.

The groups differed significantly with respect to the variable of education, with the answer "up to nine years of schooling" most influencing this difference. While a predominance of seniors were married or lived with a partner in both Group 1 (44%) and Group 2 (56%), the difference between groups and after residual analysis, it was found that the answer *never married* had influence in the identified association (Table 1).

Table 1. Distribution of seniors according to sociodemographic variables and place of living. Maringá, PR, 2011-2012.

	G1 (n= 50)		G2 (n= 173)		Total (n= 223)		*p*
Variables	n	%	n	%	n	%	
Gender							0.332
Female	31	62.0	120	69.3	151	67.7	
Male	19	38.0	53	30.6	72	32.2	
Age range							0.774
60-69 years old	21	42.0	73	42.2	94	42.1	
70-79 years old	22	44.0	69	39.8	91	40.9	
80 years old or more	7	14.0	31	17.9	38	17.0	
Educational level							0.007
None	15	30.0	54	31.2	69	30.9	
Elementary (Primary) school	18	36.0	93	53.7	111	49.7	
Secondary school	14	28.0	14	8.0	28	12.5	
High school	2	4.0	7	4.1	9	4.0	
Universitary	1	2.0	5	2.8	6	2.6	
Marital status							0.022
Married/living together	22	44.0	97	56.0	119	53.3	
Widower	16	32.0	52	30.0	68	30.4	
Divorced	3	6.0	16	9.3	19	8.5	
Never married	9	18.0	8	4.6	17	7.6	
Religion							0.496
Catholic	34	68.0	122	70.5	156	70.0	
Evangelic	16	32.0	45	26.0	61	27.3	
None	-	-	6	3.5	6	2.7	

The most common chronic health problem for both groups was Diabetes Mellitus and Hypertension. Among the 223 seniors in the study, only 48 (21.52%) said they had no health problems. Seven of these seniors were from G1 and 41 were from G2. There was no statistically significant association between place of residence and type of pathology.

Table 2 shows the different types of medical aids used by seniors. A statistical association was observed between the use of glasses or contact lenses and seniors living in the community, as well as an association between the variable need to replace dentures and residents of the condominium.

Table 2. Distribution of seniors according to the type of support used and place of living. Maringá, PR, 2011-2012.

	G1		G2		Total		
	(n= 50)		(n= 173)		(n= 223)		*p*
Variables	n	%	n	%	n	%	
Usage of glasses or contact lens							0.00896*
Yes	32	64.0	141	81.5	173	77.5	
No	18	36.0	32	18.5	50	22.4	
Usage of denture							0.59052
Yes	44	88.0	147	84.9	191	85.6	
No	6	12.0	26	15.3	32	14.3	
Need to change denture							0.0000**
Yes	37	74.0	65	37.5	102	45.7	
No	13	26.0	108	62.4	121	54.2	
Usage of walking stick							0.23234
Yes	1	2.0	14	8.1	15	6.7	
No	49	98.0	159	91.9	208	93.2	
Usage of wheelchair							0.79982
Yes	2	4.0	6	3.4	8	3.5	
No	48	96.0	167	96.5	215	96.4	
Usage of crutch							0.77578
Yes	-	-	1	0.5	1	0.5	
No	50	100.0	172	99.4	222	99.5	
Usage of hearing aid device							0.68757
Yes	1	2.0	4	2.3	5	2.4	
No	49	98.0	169	97.6	218	97.7	

*OR= 2,5; **OR= 4,7.

Table 3 shows that seniors living in the community are more satisfied with the healthcare services they use, and this group also underwent more medical exams than seniors living in the condominium. The seniors in the condominium underwent more physiotherapeutic treatment.

Table 3. Distribution of seniors according to health conditions and place of living. Maringá, PR, 2011-2012.

	G1 (n= 50)		G2 (n= 173)		Total (n= 223)		*p*
Variables	n	%	n	%	n	%	
Self perception of current health							0.128
Good	17	33.3	65	37.6	82	36.7	
Regular	20	39.2	42	24.4	62	27.8	
Bad	13	26.0	66	38.0	79	35.4	
Usage of medication							0.138
Yes	44	88.0	136	78.6	180	80.7	
No	6	12.0	37	21.4	43	19.2	
Realization of medical assistance							0.438
Yes	33	66.0	125	71.6	158	70.8	
No	17	34.0	48	28.3	65	29.1	
Satisfaction with medical service							<0.001*
Yes	14	28.0	127	73.4	141	63.2	
No	36	72.0	46	26.5	82	36.7	
Clincal exams in last year							<0.001**
Yes	19	38.0	100	57.8	119	53.3	
No	31	61.0	73	42.2	104	46.6	
Physiotherapeutic treatment							<0.001***
Yes	18	36.0	9	5.2	27	12.1	
No	32	64.0	164	94.8	196	87.8	

*OR= 2,9; **OR= 2,2; ***OR= 10,3.

DISCUSSION

The continued existence of a small group of seniors without their own income and who are incapable of meeting their basic needs makes investment in the promotion of autonomy and a healthy life necessary.[8]

As in a study of older people undertaken in Minas Gerais,[9] the majority of subjects in the present study were female. This result may be related to greater longevity among women, something which has been attributed to the fact they are less exposed to work related risk factors and have a different attitude towards disease and disability, among other factors.[8]

Despite the advances that have been made in terms of educational opportunities, older people who entered higher education remain rare in Brazil.[10] In the present study there was a predominance of older people with no more than four years of schooling, which corroborates with the findings of a study conducted in the town of Foz do Iguaçu in the state of Paraná, where 68.2% of older adults had up to four years of schooling.[11]

Though there was statistically significant difference between groups regarding educational level, the most frequent highest level individuals presented was four years of schooling. On the other hand, a study study of institutionalized and non-institutionalized seniors found that individuals in the community had a higher level of education than those in institutions, which may be related to the fact that seniors living in long-stay institutions also have a lower socioeconomic status.[12] However, this correlation cannot be made with the data from the present study, as most seniors (80.07%) who belonged to both groups had an average monthly income of one minimum wage.

The following of a religion provides seniors with a social life, interiority, through faith and prayer, and also gives them opportunities to deal with the disruptions, conflicts and loss of this stage of life, due to the establishment of new interpersonal relationships. The predominance of the Catholic religion among seniors has been identified in studies conducted in different parts of the country, for example, São Luis, in the state of Maranhão.[13]

A study of seniors in a community in São Luis[13] found a predominance of married seniors, with widowed seniors the next largest group. Similar data relating to marital status was found in the present study. It should be remembered that the variable marital status has psychosocial and existential relevance, as it contributes to an evaluation of the living conditions of an individual, considering the importance of marriage, widowhood, separation and divorce.[13] Therefore, health professionals should investigate the marital status of seniors and observe their psychological and living conditions in order to provide them with the care they need.

In terms of the marital status data of the present study, there was a statistical difference between the groups, with seniors who had never married more likely to live in the Condominium for Seniors. This result may be related to the profile of seniors from G1, the housing needs of whom often arise from the fact that they have no family of their own.

The prevalence of hypertension in Brazilian seniors is more than 60%, making it a determining factor in the morbidity and mortality of this population group, therefore requiring correct identification of the problem and an appropriate therapeutic approach.[14]

As high rates of diabetes in seniors can cause cognitive and physical decline and greatly increase geriatric syndromes, it is important that public health policy focuses on reducing reduce this burden, through health education strategies, prevention of the complications of the disease and proper nutrition.[15] For seniors to maintain an active, healthy life with a reduction of chronic disease conditions, it is essential that primary care professionals and managers create public programs and actions aimed at ensuring physical, mental and social well-being and healthy and active aging.[15] This can be achieved through activities aimed at promoting physical activity and socialization , such as tours, trips, community groups, and increasing the social support network of seniors, in addition to health education, with themes of healthy eating, sex education, violence and human rights.

In terms of the variable use of a medical aid, it was found that seniors who resided in the community were 2.5 times more likely to use visual aids (contact lens or glasses) than elderly residents in the Condominium for Seniors. Health professionals should actively monitor the vision of seniors, as decreased visual acuity is associated with the occurrence of falls.[16]

Another factor to be addressed, considering health as a multifactorial concept, is that oral health is directly related to diet quality and consequently the nutritional status of seniors. Most seniors (85.6%) who participated in both groups (G1 and G2) used dentures, however, seniors who resided in the condominium were 4.7 times more likely to need to replace their dentures. This issue therefore requires intervention, as the average denture replacement time of seniors in this study was 14 years, in contrast to the recommendation that dentures should be replaced every five years. A study of 635 seniors in North Carolina (USA) pointed out

the association between malnutrition and oral health problems, and stressed the importance of maintaining, and investing in, the oral health of seniors.[17] Therefore, it is essential that health professionals carefully monitor the use of dentures by seniors, ensuring cleaning and replacement at regular intervals, aimed at maintaining the diet quality and adequate nutritional status of seniors.

Self-assessment of health is currently considered an important indicator of the health status of individuals and populations, being a strong predictor of mortality, especially among seniors. In an extensive literature review it was detected that there is a greater risk of death in individuals who rated their health status as regular or poor than those who gave a more favorable health self-assessment.[18] Based on these findings, it is important to identify the factors that influenced the negative self-perception of health of the seniors in both groups, in order to create effective intervention strategies, as besides the increased risk of mortality, health perceived as regular or poor can interfere with the life satisfaction and subjective well-being of an individual. The self-evaluation of their health as regular by seniors in G1 supports the findings of a study in João Pessoa in the state of Paraíba[19] where 54% of seniors perceived their health condition as merely regular. With regard to the predominant perception of G2 seniors that their health was poor, it is worth remembering that seniors who consider their health to be poor are at greater risk of all-cause mortality and have a greater chance of hospitalization, compared with those who consider their health to be excellent.[19] Therefore health professionals should encourage a positive self-perception of life and health, as this represents a protection factor.

It was found that seniors living in the community were 2.9 times more likely to be satisfied with the medical services they used than individuals in the Condominium for Seniors. The greater dissatisfaction on the part of the condominium residents was related to the distance of the condominium from the nearest health facility (32%), and because they live in a location without FHS coverage (48%). This factor represents a risk because seniors, with their specific needs, require more continuous health monitoring, and this need is enhanced when dealing with seniors with a low income and low educational level. In the present study, the high rate of medication use by seniors in both groups was similar to that found in other study,[15] and is indicative of the need for vigilance on the part of health professionals as to the control and correct use of medications by seniors, since the use of multiple drugs is a risk factor for the occurrence of falls and the worsening of geriatric syndromes.

Most of the seniors in the present study had undergone a medical consultation during the previous three months. This result corroborates the findings of a study of 278 seniors in João Pessoa,[19] where 70.7% of individuals regularly sought treatment from the health service. However, it is necessary to investigate whether the medical consultation occurred due to health complications or regular monitoring.

The use of health services is the result of a process of interaction between factors relating to the individual, the health system and the context in which such use occurs.[20] Seniors belonging to G2 were 2.2 times more likely to undergo medical exams than those in G1, which may be related to the personal and subjective characteristics of seniors in G2, and an increased demand for medical consultation.

Regarding the health system and the context in which the consultation occurs, it should be noted that the construction of the condominium in an expensive area of the city, where there is no FHS coverage, is also an influential factor in this result. A lack of monitoring of seniors by health professionals represents a failure to comply with one of healthcare priorities of the Ministério da Saúde (Brazilian Ministry of Health), namely that the aim of the Política Nacional de Saúde da Pessoa Idosa[21] (National Health Policy for Seniors) is to provide complete health care under the Sistema Único de Saúde (National Health Service). Another factor which may be associated

with this result is the mention by seniors in G1 of the lack of a BHU close to the condominium.

Therefore, it is necessary to establish a BHU closer to the Condominium for Seniors, so that the FHS can provide care for residents of this new type of housing, considering the unique characteristics of aging. Partnerships with universities and municipal colleges should also be developed, providing internships for scholars and meeting the needs of seniors. In addition, the culture and characteristics of the individuals in the study must be considered, as these factors influence whether an individual seeks or does not seek medical care, or subsequently undergoes medical exams.

The maintenance of the functional capacity of seniors is directly related to healthy aging, as it constitutes one of the most effective actions against physical, mental and social difficulties.[1] Encouraging the elderly to perform guided exercise and physical therapy is therefore extremely important. Living in the condominium is a protective factor for maintaining functional capacity, as the elderly in G1 were 10.3 times more likely to undergo physical therapy. This is due to the fact that the board of this housing facility have formed a partnership with one of the city's colleges, allowing physiotherapy interns to offer supervised care for the residents of the condominium once a week.

It can therefore be concluded that the identification of factors requiring intervention can guide the planning of strategies to improve the care provided to seniors, and consequently contribute to the effectiveness of this new housing policy, which is an existing current resource in the city.

As a limitation of the study, it can be considered that the participants had low educational level, which was a difficulty to self-assessment with the instrument and to their understanding of the mentioned aspects. However, in order to minimize this problem, the questions of the instrument was made by the interviewer.

CONCLUSION

Regarding living conditions, the seniors differ significantly when it comes to educational level and civil status. In terms of health conditions, it was noted that the majority of seniors assessed their health as good, but that there were some challenges related to high rates of chronic diseases and medication use. The oral health profile identified requires greater attention from health professionals and managers, especially in relation to seniors living in the Condominium.

The collection of data from residents of a condominium for seniors and seniors in the community, as well as the comparison of the results of statistical analysis of such data, is an indispensable information source for policy makers and health professionals, as it aids in the planning of comprehensive care for seniors.

The results indicate the importance of managers and health professionals working together to provide FHS coverage for the residents of the Condominium for Seniors. After all, this housing method is a policy that should be expanded, so that low-income and homeless seniors have access to and can experience opportunities that were previously denied to them. However, a professional approach to meeting the needs of residents and the network of services available are determining factors for the success of this policy.

There is also a need to train health professionals to focus on health promotion and disease prevention of seniors. Such professionals should have the required knowledge to create strategies addressing the real needs of this population group, and thus provide complete, humanized care.

One of the limitations of this study was the fact that the educational level of the participants was low, making self-application of the questionnaire, and understanding of the points raised, difficult. To minimize this problem the interviewer herself applied the interview questionnaire.

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