

### **Elderly families of South of Brazil in the Health Strategy**

Famílias de idosos na Estratégia de Saúde no Sul do Brasil Familias de edad avanzada en la Estrategia de Salud en el sur de Brasil

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#### How to cite this article:

Wendt CJK, Aires M, Paz AA, Fengler FL, Paskulin LMG. Elderly families of South of Brazil in the Health Strategy. Rev Bras Enferm. 2015;68(3):350-7. DOI: http://dx.doi.org/10.1590/0034-7167.2015680305i

**Submitted:** 12-17-2014 **Approved:** 03-19-2015

#### **ARSTRACT**

**Objective:** to characterize families and health status of the elderly in the Family Health Strategy and to verify the association of family composition with sociodemographic characteristics and health of the elderly. **Method:** population-based study with 215 families and 266 elderly, linked to the Family Health Strategy from a city of Rio Grande do Sul state. **Results:** there was predominance of nuclear family composition, considered as the main source of informal support, families of female elderly (62.6%) and cardiovascular complication. The nuclear structure was significantly associated with female gender (PR = 0.77; p = 0.025) and smoking (PR = 1.35; p = 0.009). **Conclusion:** the results reinforce the need to maintain a network of formal and informal support to the elderly and their families to preserve the independence or to postpone the decline in functional capacity. **Key words:** Health of the Elderly; Health Profile; Family Health.

#### **RESUMO**

**Objetivo:** caracterizar as famílias e situação de saúde de idosos na Estratégia de Saúde da Família e verificar a associação da composição familiar com as características sociodemográficas e de saúde dos idosos. **Método:** estudo de base populacional, com 215 famílias e 266 idosos, adscritos à Estratégia da Saúde da Família, de um município do Rio Grande do Sul. **Resultados:** predomínio da composição familiar nuclear, considerada como a principal fonte de apoio informal, de famílias de idosos do sexo feminino e agravos cardiovasculares. A estrutura parental nuclear teve associação bruta significativa com o sexo feminino e o consumo do tabaco. **Conclusão:** os resultados reforçam a necessidade de manutenção de uma rede de apoio formal e informal ao idoso e sua família para preservar a independência ou postergar o declínio da capacidade funcional.

Descritores: Saúde do Idoso; Perfil de Saúde; Saúde da Família.

#### **RESUMEN**

**Objetivo:** la caracterización de las familias y de la situación de salud de ancianos en la Estrategia de Salud de la Familia y, además, la verificación de la asociación de la composición familiar con las características sociodemográficas y de salud de los mayores. **Método:** estudio de base poblacional, con 215 familias y 266 ancianos, adscritos a la Estrategia de Salud de la Familia, de un municipio del Rio Grande del Sur. Prevaleció la composición familiar nuclear, considerada como la principal fuente de apoyo informal y de familias de ancianos del sexo femenino (62,6%). **Resultados:** los resultados de la asociación bruta de las variables en el estudio con la composición parental nuclear ha demostrado asociación significativa (p < 0,05) con el sexo femenino (RP = 0,77; p = 0,025) y el consumo de tabaco (RP = 1,35; p = 0,009). **Conclusión:** estos resultados refuerzan la necesidad de manutención de una red de apoyo formal e informal al anciano y a su familia para preservar la independencia o postergar el descenso de la capacidad funcional.

Palabras clave: Salud del Anciano; Perfil de Salud; Salud de la Familia.

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#### INTRODUCTION

The increase in life expectancy generated some major changes in the human body. Many of them are considered natural, due to the aging process. These physiological, psychological and pathological changes end up compromising the functioning of the body and can result in decreased quality of life and increased morbidity and mortality<sup>(1)</sup>. During the aging process<sup>(2)</sup> some may experience losing their partner, the decline of the socioeconomic and cultural conditions, which associated with physical or psychological deterioration, contribute to increased susceptibility to the weakening of social and family networks. Thus, the elderly require a network of formal and informal support to preserve the independence or postpone the decline in their functional capacity.

The presence of disease in advanced age are likely to lead to disability and dependence for performing some daily activities, known as basic activities of daily living (BADLs) and instrumental activities of daily living (IADLs). The condition of necessity for assistance in daily activities requires more attention from family members, caregivers and healthcare professionals. Concomitantly, it is known that the higher demand for health services occurs by the elderly, requiring frequent and prolonged hospital admissions, compared to other age groups. Thus, population aging<sup>(3-4)</sup> can be translated into a greater number of morbidities in the population, disability, dependence and use of health services.

With the implementation of preventive measures to pathological aging, it is possible to reduce costs in the health system reflecting the resources of society. Indeed, proper planning of social and health actions in line with the population's needs<sup>(5)</sup> may contribute to the welfare and independence, ensuring a healthier aging.

The heterogeneity of this population and the diversity lead to greater concerns regarding the development of policies to meet specific needs and demands of care arising from the aging process. The National Health Policy for the Elderly (PNSPI) highlight that the main problem affecting the elderly is the loss of functional capacity, that is, the loss of physical and mental capacity necessary to perform BADLs and IADLs. As a result, the PNSPI<sup>(6)</sup> aims to "recover, maintain and promote the autonomy and independence of the elderly, directing collective and individual health measures for this purpose, in line with the principles and guidelines of the Unified Health System" (SUS).

The growing elderly population is associated with profound social transformations, especially in family arrangements, we highlight the need to strengthen public policies to support families<sup>(7)</sup>. Expected family arrangements to elderly are of two types: couple with children (nuclear) or single families - elderly living alone. In the situation of elderly and children living in the same household there is a subdivision: elderly family (in which elderly people are the provider or spouse) and family with elderly people (elderly living in the condition of kinship)<sup>(7)</sup>. Analyzing the internal aspects of family arrangements is a complex and at the same time difficult task. The different classifications of family arrangements are the result of social changes occurring in Brazil and in the world<sup>(7)</sup>. To classify the families of the elderly in this study, we used another

classification mode: Single parent family (one of the parents and children), nuclear family (father, mother and son/daughter) and extensive family (father, mother, son/daugther, grand-parents, or other relatives)<sup>(8)</sup>.

The Family Health Strategy (FHS) is considered innovative in the setting of health services, as it prioritizes the promotion, protection and recovery of health of individuals and families in a continuous and comprehensive manner. Assistance is centered on the family, perceived and located in physical and social environment, to their beliefs and values, favoring the widely understanding of the health-disease process, within a defined territory. Thus, the political and administrative organization of the FHS assist the challenges for caring for this emerging population, as it has incorporated homecare to dependent people and include the planning and funding for multi-sector actions on the part of a social network to support the family-caregiver. Health promotion actions with measures of protection, identification and monitoring of social and health indicators stand out for being able to assess the health situation, the impact of morbidity and mortality, disability of the elderly and family needs to take care of the elderly in their homes (5,9-10).

In family health perspective, the nurse working in the health team intensifies its conduction of educational and health care activities, valuing the aging process of the families, especially the elderly who often does not have enough of proper health care. Thus, the role of the nurse in the planning and coordinating health services focusing the health care of families is essential, prioritizing sociodemographic and epidemiological conditions of the assisted population.

Despite advances in legislative terms, regarding the role of the state in protecting the health of the elderly population and the implementation of the FHS, the care practice is still unsatisfactory given that public policies have failed to keep up with the growth and meet all the needs of health of this age group. The family is still, for the most part, the primary responsible for care for the elderly, caring for them full time, or delegating the care to others. Therefore, the responsibility for caring is assumed by family members as an individual or family problem due to the lack or insufficiency formal support of the state.

The objectives of this study were to characterize families and health status of the elderly in the Family Health Strategy and to verify the association of family composition with sociodemographic and health characteristics of the elderly. The study is justified as it seeks to know the families of elderly assisted by a FHS team, located in a city of the Northwest of Rio Grande do Sul state. The study aims to contribute to local planning of health actions and implementation of public health policies according to the particularities of this emerging age group. In addition, the increase of epidemiological studies to characterize families and their elderly members in the context of the FHS is important in order to promote a comprehensive and resoluteness care to maintain the autonomy and functional capacity.

#### **METHOD**

Cross-sectional study with population-based sample, characterized as survey. The research setting was one FHS from a

city in the Northwest Region of the Rio Grande do Sul state. The study sample consisted of all families that had one or more elderly members aged equal or greater than 60 years, who lived in the area covered by the FHS. The inclusion criterion was: having one or more elderly members in the family, while the exclusion criterion was: family or elderly not being home after three attempts. Prior to data collection, a pilot test was conducted with five families with elderly from another FHS in the city, to assess the applicability of the instrument. Thus, it was concluded that the instrument used appropriate and understandable language and therefore ready to be used in the study.

The families were identified through the Families Identification Form (Form A) used by the FHS and in line with the inclusion criterion, having one or more elderly members, generating a total of 290 families and 393 elderly. The sample consisted of 215 (74.1%) families and 266 (67.7%) elderly in the FHS setting.

With regard to losses of participating families, 75 (25.9%) was due to the fact that 67 (23.1%) elderly no longer lived with the family in the study setting and eight (2.8%) families, their only elderly member died during the period of data collection. Regarding the loss of participation of the elderly, 67 (17%) elderly were not located, as they did not live anymore in the study setting; 24 (6.1%) expressed their decision not to participate; 15 (3.8%) were excluded after three attempted home visits; 13 (3.3%) did not belong to the age group of 60 years or more, as had been registered on Form A, and eight (2.1%) died during the period of data collection.

Data were collected through semi-structured interview, applied to the elderly or caregiver during household survey. To collect data we used two instruments(11): a) the Family General Questionnaire (FGQ), which served to register and identify families with one or more elderly members, and approached the family composition, socioeconomic status and the social support network of the family. Regarding family composition the following categories were used: Single parent family (one of the parents and children), nuclear family (father, mother and son/daughter) and extensive family (father, mother, son/ daugther, grandparents, or other relatives). b) The Specific Questionnaire for the Elderly (SQE), which addressed the sociodemographic, behavioral and health situation of elderly and the need for care. The degree of dependence<sup>(12)</sup> was evaluated by the scales of BADL and IADL. For each individual, the answers "need help" and "does not need help" were quantified using the following categorization: independent, mild dependence, moderate dependence and severe dependence.

Statistical analyzes occurred in descriptive and analytical method using the Statistical Package for Social Sciences, version 18.0. The nominal categorical variables are presented by absolute and relative frequency, while the discrete variables are presented as mean and standard deviation.

Then, we applied Wald chi-square test estimated by simple and multiple Poisson regression to the variables: gender, age, marital status, education, smoking, morbidity, dependence for BADL, dependence for IADL and need for caregiver. The variable of interest was the family composition.

For the association of family composition, we considered the nuclear family structure as baseline to identify differences with other types of family arrangements. For this test the variables with p values <0.20 for the bivariate analysis of outcomes for inclusion in the multiple regression model were selected. The selected variables (p<0.20) for the linear model were subjected to the test of Multicollinearity used in multivariate models for the evaluation of Multicollinearity - Variance Inflation Factor (VIF) and is considered to keep the model variables with FIV<2.0. Finally, multiple Poisson regression (p<0.05), consists in the adjusted analysis that understood the statistical significance when adjusted for other variables. The outcome used for generalized linear modeling was the nuclear family structure.

The study is part of a project entitled "Characterization and utilization of the formal and informal social support network to the elderly and their family caregivers", approved by the Research Ethics Committee of the *Universidade Regional Integrada do Alto Uruguai e das Missões, Frederico Westphalen Campus*, protocol CAAE-0013.0.284.000-11.

#### **RESULTS**

## Characterization of families and informal support networks to the elderly

Regarding the characteristics of the 215 families, the number of individuals living at home with the elderly, it was found that in 52 (24.1%) families the elderly lived alone (that is without any other family member companion); in 82 (38.2%) families, the elderly lived with only one family member; 39 (18.1%) families had at home 2-3 people living with the elderly, and in 42 (19.5%) families there was the coexistence of 4 or more people with the elderly. In family structure, the most frequent were nuclear family structure in 109 (52%) households in which the family composition was mother, father and children. In 52 (24.19%) families, the structure was considered extensive family (added to the family sons in law, daughters in law, grandchildren, siblings, etc.) and 51 (23.72%) single parent families, there was only one person in the household. In 84 (39.1%) families, the members constituting the household received two minimum salaries per month, with the reference value, in reais R\$ 545.001. It was found that 53 (24.6%) families were living with just one salary and 78 (36.3%) received three or more salaries.

Another fact of the research was the presence of other elderly at home. In 134 (62.3%) families there was the presence of a person aged equal or over 60 years; 77 (35.8%) families had two elderly individuals in the same household and in three (1.4%) families there were three elderly members at home.

During the time of the research, the minimum salary, per month, in Brazil corresponded to R\$ 545,00 reais or U\$ 171,45 dollars according to the Central Bank of Brazil on May 30th, 2015.

When asked about the main informal support network, mainly, the family was considered the main source of informal support, demonstrating the presence of the son/daughter and siblings. When asked about the use of Formal Support Network, 62.78% of the participants identified the Family Health Unit as their main network.

#### Sociodemographic characteristics, health status and degree of dependence of the elderly

Table 1 shows the sociodemographic characteristics of the study participants.

As Table 1 indicates, there was a prevalence of females, mean  $70.32 \pm 6.86$  years, and maximum age of 99 years old.

The most frequent age group were 60-64 years old, 84 (31.6%); 65-69 years old, 54 (20.3%); 70-74 years, 50 (18.8%); 75-79 years, 37 (13.9%); and 80 or more years, 41 (15.4%). Regarding marital status, it was observed that most of them lived with a partner, 140 (52.6%). Regarding education, 52 (19.6%) elderly were illiterate.

The diseases were classified according to the 10th revision of the International Classification of Diseases (ICD-10), in line with 582 conditions reported by elderly or caregivers. There was a prevalence of elderly patients with cardiovascular diseases, especially hypertension, followed by endocrine, nutritional and metabolic diseases, diseases of the musculoskeletal system and connective tissue, respiratory diseases and the mental and behavioral disorders. Among the other causal groups, we highlight digestive system diseases, 19 (3.2%); diseases of the genitourinary tract 15 (2.5%); diseases of the ear and mastoid apophysis, eight (1.4%); neoplasms (tumors), five (0.9%); diseases of the eye and attachments, four (0.7%); diseases of the nervous system, three (0.5%); and one case of other morbidities (0.2%) for certain infectious and parasitic diseases, diseases of the

blood and blood forming organs and certain immune disorders, diseases of the skin and subcutaneous tissue.

Table 2 shows the results of the degree of dependence for the BADL and IADL, the need to care for the family for the elderly in their homes.

In assessing the degree of dependence for the BADLs and IADLs, it was found that most elderly were independent for basic daily activities. A higher dependence to the IADLs, considered as social activities domain. As regards to the need for care, most elderly reported that care was unnecessary for maintaining their physiological and social activities.

For the association of family composition having nuclear family structure as baseline with sociodemographic and

**Table 1 -** Sociodemographic and health characteristics of the elderly registered in the FHS, in a city of Northwest Region of Rio Grande do Sul state, Brazil, 2013

| Variables   | n (%)         |
|---|---------------|
| Gender (female)                                       | 182 (68.4)    |
| Mean age (years)                                      | 70.32 (6.86)* |
| Marital status (no partner)                           | 126 (47.4)    |
| Education (yes)                                       | 214 (80.4)    |
| Presence of morbidity (yes)                           | 233 (87.6)    |
| Presence of comorbidity (yes)                         | 175 (75.1)    |
| Morbidity (ICD-10)                                    |               |
| Diseases of the Circulatory System                    | 240 (41.2)    |
| Endocrine, Nutritional and Metabolic diseases         | 97 (16.7)     |
| Musculoskeletal System and Connective Tissue Diseases | 91 (15.6)     |
| Respiratory Diseases                                  | 56 (9.6)      |
| Mental and behavioral disorders                       | 41 (7.1)      |
| Other causal groups                                   | 57 (9.8)      |
| Drug treatment (yes)                                  | 226 (84.9)    |

<sup>\*</sup>Continuous Variable presented as mean ± standard deviation

**Table 2 -** Degree of dependence for BADL and IADL and elderly need for care registered to the FHS, in a city of Northwest Region of the Rio Grande do Sul state, Brazil, 2013

| Variables  | n (%)      |
|--|------------|
| Dependence for basic activities of daily living – BADLs              |            |
| Independent  | 249 (93.6) |
| Mild dependent   | 9 (3.4)    |
| Moderate dependent   | 6 (2.3)    |
| Severe dependent   | 2 (0.7)    |
| Dependence for basic instrumental activities of daily living – IADLs |            |
| Independent  | 178 (66.9) |
| Partially dependent  | 82 (30.8)  |
| Totally dependent  | 6 (2.3)    |
| Need for care (yes)  | 54 (20.3)  |

health characteristics were defined the following variables: gender, age, marital status, education, smoking, morbidity, dependence for BADLs, dependence for IADL, and needs for caregivers. Table 3 shows the results of the crude and adjusted association by Poisson regression (p < 0.05).

The results of the crude association of variables with nuclear family structure (Table 3) showed a significant association (p<0.05) for females (PR=0.77; p=0.025) and smoking (PR=1.35, p=0.009). For the adjusted analysis, we considered all sociodemographic variables and health status with significant association (p<0.20) for inclusion in the generalized linear model. By Poisson regression no statistically significant differences were found (p<0.05) between variables.

**Table 3** - Crude and adjusted Poisson regression analysis by nuclear family structure and sociodemographic and health characteristics of the elderly in a city of the Northwest region of Rio Grande do Sul, Brazil, 2013

| Variables          | Prevalence of family structure n(%) | Crude analysis     |          | Adjusted analysis† |           |
|--------------------|-------------------------------------|--------------------|----------|--------------------|-----------|
|                    |                                     | PR (95%CI) n = 266 | p value* | PR (95%CI) n = 265 | p value ‡ |
| Gender             |                                     |                    | 0.025    |                    | 0.213     |
| Male               | 52(61.9)                            | 1.00               |          | 1.00               |           |
| Female             | 87(47.8)                            | 0.77 (0.61; 0.96)  |          | 0.85 (0.66; 1.09)  |           |
| Age group          |                                     |                    | 0.886    |                    |           |
| < 80 years         | 118(52.4)                           | 1.00               |          |                    |           |
| ≥ 80 years         | 21(51.2)                            | 0.97 (0.70; 1.35)  |          |                    |           |
| Marital status     |                                     |                    | 0.227    |                    |           |
| No partner         | 70(56)                              | 1.00               |          |                    |           |
| With partner       | 68(48.6)                            | 0.86 (0.68; 1.09)  |          |                    |           |
| Education          |                                     |                    | 0.065    |                    | 0.108     |
| No                 | 32(62.7)                            | 1.00               |          | 1.00               |           |
| Yes                | 106(49.5)                           | 0.78 (0.61; 1.01)  |          | 0.80 (0.62; 1.04)  |           |
| Smoking            |                                     |                    | 0.009    |                    | 0.086     |
| No                 | 75(46)                              | 1.00               |          | 1.00               |           |
| Yes                | 64(62.1)                            | 1.35 (1.07; 1.69)  |          | 1.24 (0.97; 1.59)  |           |
| Morbidity          |                                     |                    | 0.774    |                    |           |
| No                 | 18(54.5)                            | 1.00               |          |                    |           |
| Yes                | 121(51.5)                           | 0.95 (0.68; 1.33)  |          |                    |           |
| BADLs              |                                     |                    | 0.953    |                    |           |
| Independent        | 130(52.2)                           | 1.00               |          |                    |           |
| Dependent          | 9(52.9)                             | 1.01 (0.63; 1.61)  |          |                    |           |
| IADLs              |                                     |                    | 0.284    |                    |           |
| Independent        | 89(50)                              | 1.00               |          |                    |           |
| Dependent          | 50(56.8)                            | 1.13 (0.89; 1.43)  |          |                    |           |
| Need for caregiver |                                     |                    | 0.055    |                    | 0.133     |
| No                 | 105(49.5)                           | 1.00               |          | 1.00               |           |
| Yes                | 34(63)                              | 1.27 (0.99; 1.62)  |          | 1.20 (0.94; 1.54)  |           |

Source: Research data.

Notes:

\* Wald Chi-square test (p < 0,20).

#### **DISCUSSION**

The fact that the elderly lived alone, without the companion of another family member, corroborates the results reported by the Synthesis of Social Indicators<sup>(13)</sup>, in 2009, which points to the drop in the mean number of people per households,

from 3.4 to 3.1. Compared with study<sup>(14)</sup> conducted with elderly of one FHS of the city of Guarulhos, in the state of Sao Paulo (SP), we found different results, because most of the elderly (52%) lived in households with four to six people. In the study<sup>(15)</sup> held in Porto Alegre-RS, 78.1% lived with someone, mainly with family member. It is known that an aging

<sup>†</sup> Adjusted variables: Gender, Education, Smoking, need for caregiver.

<sup>‡</sup> Wald Chi-square test (p < 0,05).

population brings changes in the structure of families, since there is an increase in the number of households with elderly, increasing the interrelation between generations in the same household. The family is seen as a source of informal support and often considered the only form of support for the elderly. However, the expansion of families with new kinships might be a strategy to benefit people involved.

Regarding the informal social support, in one study<sup>(16)</sup> conducted in Sao Carlos-SP, most of the elderly reported to have the support of the children and their spouses. In another research<sup>(15)</sup> conducted with a household survey on the same population of the Northwest region of Porto Alegre-RS, most people reported that they did not realize receiving informal social support. However, among older people who reported receiving some informal support, this was done by the spouses, siblings, grandchildren, daughters, sons, friends and neighbors<sup>(15)</sup>. In Sweden<sup>(17)</sup>, a research conducted with elderly aged above 75 years and dependent of care, concluded that the main informal support comes from informal caregivers, among them, members of their family.

The sociodemographic profile presented in this study is similar to those found in other Brazilian epidemiological studies dealing with the health of the elderly, which highlights the predominance of females<sup>(2,10,15,18)</sup>. These results confirm the census data<sup>(13)</sup> where 55.7% of the population aged over 60 years are women. The feminization of elderly is an important characteristic of this group. Over the years, they become more vulnerable and present more functional disability index. Additionally, they also tend to be poorer than men in old age, as a result of their employment history or dedication to the care of children and also for receiving lower salary than men. Another important aspect is that women tend to live alone after widowhood and this proportion increases with age, while men get married again, usually with younger women<sup>(3,10-11,15)</sup>.

The mean age was similar to that found in other studies<sup>(2,15,18)</sup>. In this study, the age of participants can be classified as young-elderly. Different results were found in other studies<sup>(15,18)</sup> in the state of RS, where it became clear that older people belonged to a higher age group (70-79 years). However, one must take into account the increase of age groups within the population aging process, which illustrates the aging trend of the age structure, especially in the group aged 80 and older, which reached 1.7% of the population in 2011, corresponding to over 3 million individuals<sup>(13)</sup>.

Regarding marital status, the results differ from those found in other research<sup>(15)</sup>, where most had no spouse or partner. Other studies<sup>(2,9,18)</sup> showed similar results to those found in the present study. Concurrent with the reduction of mortality in older individuals, there is the possibility of increasing the proportion of married people and new marriages.

There was also a considerable reduction in the number of children compared to another study<sup>(11)</sup> held in the same city. According to the World Health Organization (WHO), some factors have an impact on the family care for the elderly, above all, recent social changes, youth migration to cities in search of work or better living conditions, the women's entry into the formal labor market and changes in family structure, by reducing the number of children. These facts, among others, causes the reduction of

family caregivers available to care for the elderly<sup>(19)</sup>. Therefore, the expansion of formal and informal support networks is a necessity, as these are able to provide assistance and promote health in view of the strengthening of actions that enhance self-care.

Other studies<sup>(11,15)</sup> also found that most of the elderly people were retired. At this stage of life, income from retirement and pensions can still be considered a form of earning. However, the integration of people considered elderly in the labor market is increasing, which contributes to the composition of family income<sup>(20)</sup>.

With reference to education, study<sup>(15)</sup> performed with the elderly population found that most had primary education. By the year 2000, there was a significant increase in the elderly literate population. However, education<sup>(11,20)</sup> of the Brazilian elderly is still considered low, reflecting the educational policies of the past decades, when access to school was restricted. Education can influence the health-disease process, since we consider that many elderly are illiterate and, in some cases, living alone, represent a vulnerable group that deserves greater attention from health professionals. As those affected by disease, some may not be able to take care of their own health, requiring health professionals strategic actions capable of encouraging self-care, involving family members<sup>(3,14)</sup>.

The most prevalent pathologies confirm the results of studies on diseases of the circulatory system<sup>(11,20)</sup>. Another study, in the city of Bage-RS showed that among the main factors associated with home health care are the history of cerebrovascular accident (CVA), signs of dementia and functional incapability for IADLs<sup>(21)</sup>. We highlight the importance of the FHS in identifying users at risk for developing chronic diseases that may cause dependence and the importance that nurses have on the organization of home care.

Human aging cannot be considered disease. However, it is known that the elderly are more vulnerable to developing chronic diseases, causing disability and dependence, which makes them in more need for care by health professionals and their families, increasing the demands of resources and health care.

The dependence for BADL and IADL generates need for care, as it compromises functional capacity of the elderly in a way that prevents self-care. In general, the functional limitations are frequent in the elderly, a fact that has been confirmed by studies demonstrating the existence of increasing disability with advanced age. In comparison with other studies<sup>(11,20)</sup> performed with the same population in regard to the independence for BADL, which there was also prevalence of independent elderly in the community.

Regarding the IADL, it was identified greater dependence of the elderly in socially oriented activities, when compared to other studies. In one study<sup>(11)</sup> held in other FHS from the same city of the research, found a 81.3% independence of the elderly to the BADLs. In relation to partial dependence, 13.1% of the elderly were partially dependent to the IADL. In the study of Farinasso and colleagues<sup>(20)</sup> there were also differences, as 61.7% of participants were considered independent and 16.3% totally dependent for the IADLs. Thus, in comparison with this study, we identified greater independence for IADL of elderly (2.3%), showing better life conditions for BADLs.

Regarding crude analysis, we identified that the female gender was significantly associated with nuclear family structure. Concomitant to the process of population aging, the advanced age feminization occur, in which the proportion of women is higher with advancing age during the study segment. This finding may be related to socioeconomic trajectory of older generations studied that have less education, are pensioners and dependents from their families<sup>(7)</sup>. Moreover, the family institution has undergone changes in their structure and organization. These changes are due to several factors such as: the inclusion of women in the labor market, the gradual reduction in fertility rates, the control of birth rates and changes in the social, cultural, economic and political scenario. These factors has influenced family composition and changed the way of caring for the elderly. Currently, the family is responsible for the care of social demands and health of the elderly population (22), however, the demand for formal support network is growing.

The same association was observed with smoking, the result may have been random. Further studies should be done to confirm or not this association. Either way, healthcare professionals in this region should develop initiatives for the prevention of smoking in these families and the encouragement of smoking cessation.

For the Poison regression (adjusted analysis) significant associations were not identified, which implies that the development of new studies and the evaluation of a sample size that allows the discovery of factors that can be used to establish diseases prevention strategies to contribute to public policy and healthy aging should be conducted.

The FHS should be considered the population's entrance to health services, providing health promotion, disease prevention, health surveillance, treatment of illness and rehabilitation of health. Among the action strategies, the health of the elderly came to be regarded as a priority at SUS and agreed among the three government spheres. Among the guidelines of PNSPI we highlight the promotion of active aging which composes actions that allow one to age while maintaining their functional capacity and autonomy<sup>(6)</sup>. The Elderly Statute and its use as a tool for enforcing the rights of the elderly and FHS actions have revealed the presence of fragile family structure for older people, that is, in conditions of extreme social vulnerability. In turn, the incipient insertion of the State Networks for Elderly Health Assistance become imperative to readjust the PNSP.

These results are relevant, because it showed the need to implement educational activities directed to the elderly

population. These findings enable discussions among managers of city health services so that they can draw attention to elderly health strategies at the same time enclose the therapeutic itinerary in the care network that values protecting the health of the elderly in the face of limitations inherent in the aging process. There is a consensus among the various scientific specialties that the permanence of the elderly in their family and community centers contributes to their well-being<sup>(7)</sup>. Being the family, in many cases, the care provider for the elderly, which highlighted the need for a qualified and constant support to those responsible for such care, and the FHS has a key role.

#### **CONCLUSIONS**

In the present study we found the prevalence of the nuclear family composition, considered the main source of informal support and the female elderly families with presence of morbidity related to cardiovascular system. We found crude association of female smoking with nuclear family structure. Based on these findings and recommendations, other actions involving the elderly, and family services can be arranged with a view to implement policies related to elderly and the strengthening of the elderly care network in the city setting of this study.

Another important highlight is the Continuing Health Education (CHE) for qualification of FHS professionals to meet the health needs of elderly people and other age groups in the aging process. Furthermore, CHE aims to contribute to the organization of services and training of professionals in the area of elderly health.

Cross-sectional studies have limitations with respect to the time flow. We suggest conducting further studies to deepen the association of family composition, considering only in the crude analysis. In addition, this study showed the proposition of new research to analyze the formal and informal support networks in the care of the elderly population.

#### **ACKNOWLEDGEMENTS**

We thank the Foundation of the *Universidade Regional e Integrada do Alto Uruguai e das Missões (FURI)* for funding this research through the Research protocol No. 03/2011, and the Scholarship Program for Scientific Initiation (PROBIC).

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