

# Social Networks in Health Care for Hypertensive Elderly People

ORIGINAL

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## Abstract

**Background:** Social Networks are characterized by their dynamism and continuous exchange of information, being fundamental to face acute or chronic health conditions and their related problems. It is therefore believed that elderly hypertensive people are inserted in social networks formed through interactions that help them face chronic disease and that such structures include diverse aspects that affect the care processes that are directly related to the perceptions of these patients on hypertension and its treatment.

**Aim:** To disclose social networks used by elderly hypertensive patients created through the health care offered by health professionals and/or relatives.

**Method:** Descriptive cross sectional study with a qualitative approach developed in two basic care urban units of a Northeastern Brazil municipality during February and March, 2016. The sample was composed of 26 elderly patients of both sexes registered in the selected units. Data collection took place through a semi-structured interview carried out at the patients' domiciles. Data was processed through the IRAMUTEQ software and analyzed through the Descending Hierarchical Classification (DHC).

**Results:** Were introduced in two axes: Axe 1: hypertension implications in the life of the elderly according to the following classification: Class 5: pharmacological treatment and side effects; Class 4: hypertension signs and symptoms; Axe 2: hypertension-based links formed with the different classes; Class 2: links that strengthen care; Class 1: pharmacological treatment and side effects; Class 3: professionals who promote hypertensive elderly patients' care.

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**Conclusion:** Interactions developed by hypertensive elderly patients reveal the key role that pharmacological treatment plays in the construction of social networks, negatively affecting the elderly perceptions on the right therapy and highlighting health professionals that promote health care.

**Keywords**

Nursing; Hypertension; Elderly;  
Social Networks Analysis.

## Introduction

Population aging is a global phenomenon. Turning 60 has become more and more common all over the world, including developing countries such as Brazil. In 2000, the global elderly population reached 600 million people and it is expected that by 2025 this number will double, reaching 2 billion by 2050. In the domestic scenario, the number of old people grew 36% in the last decade only [1, 2].

As population ages, we observe the occurrence of chronic diseases such as the Systemic Arterial Hypertension (SAH) which is a serious health concern that affects billions worldwide. In Brazil, SAH prevalence varies from 22% to 44% for adults, reaching more than 50% in individuals aged 60 to 69 and 75% in people over 70 [3, 4].

Before these realizations, it is fundamental to perform an accurate follow-up together with HAS patients, getting familiar with the environment in which they are inserted and discovering the dilemmas they have to face, as well as identifying the support networks and the means they use to connect and exchange information on the health condition they are facing [4, 5].

In Brazil, among the minimum strategic initiatives that are the responsibility of municipalities in Primary Health Care (PHC) we can mention arterial hypertension control, which is carried out through the diagnosis, registration of SAH patients, active search and treatment follow-up, as well as through educational practices [7].

In this scenario, the role of the nurse deserves special attention, as the Family Health Strategy (FHS) offers this professional an adequate field to develop an assistance based on preventing health problems, the promotion of healthy practices and rehabilitation of individuals and communities, taking into account in this context the possibility to learn more about the patients and the different relations that they develop. [8, 9].

As for the interactions established between hypertensive patients and the health assistance team, it is essential to know that they are directly or indirectly configured, whether formally or informally. In addition to personal interests, they are crucial for the development of group activities, which may be understood under the Social Networks Analysis prism. (SNA) [6, 10, 11].

Characterized by their dynamism and permanent information exchange, social networks are fundamental to face health conditions and their acute or chronic problems. In this organizational structure, each individual's functions and cultural identity are preserved, highlighting that information and knowledge flow through the network, which is not limited to a simple addition of relationships, thus becoming a strategy to articulate collective interest initiatives [12, 13].

Considering that the hypertensive elderly are inserted in social networks that manifest through strong and weak interactions that help facing this chronic condition and seek to reveal the situation in which these patients are in, this study intends

to unveil hypertensive elderly social networks, as well as their perceptions on the assistance received and offered by health care professionals and/or relatives.

## Methods

This is a cross-sectional study with a qualitative approach developed in February and March 2016 in two basic care FHS units located in the urban area of Picos, Piauí, Brazil, in a low income and low schooling elderly population area.

The study included 26 elderly patients registered in the units for at least 12 months. Participants were selected randomly according to the following inclusion criteria: being 60 years old or more and being diagnosed with SAH obtained by checking clinical records. Elderly patients with compromised speech who would have trouble responding the interview questionnaire were excluded.

Data collection was made through a semi-structured interview carried out in the patients' domicile by nursing academics from a public university, duly qualified for this purpose. It is worth highlighting that all interviews were recorded and fully transcribed, as authorized by each participant after reading the Free and Informed Consent Form (FICF).

Data was processed through the IRAMUTEQ® software (Interface de R pour analyses Multidimensionnelles de Textes et de Questionnaires), where class subdivisions, words and expressions that helped verify the relations among lexical structures frequently heard in patients' statements were organized and grouped.

Data analysis was based on the Descending Hierarchical Classification (DHC). The corpus was composed of all interviews contents, which correspond to 23 initial context units (ICU) starting from command lines defined in agreement with the set categories: elderly, sex and FHS.

The study followed ethical standards recommended by the National Health Council resolution

466/2012 [15] on research developed with human beings. Participants were informed on the study goals and the confidentiality of their answers to avoid future constraints.

## Results

The IRAMUTEQ® generated the classification of 712 text segments, with a total of 801 elementary context units (ECU), which represent a significance of approximately 88,9% of the text. The analysis generated by the software resulted in five semantic classes in the descending hierarchical classification (DHC) according to the similarity of the lexical structure of words and text segments that share the same word [14], as observed in **Figure 1**.

A Descending Hierarchical Classification enabled the identification of textual domains that also permit the interpretation of study findings. As observed in **Figure 1**, the corpus containing the elderly perceptions on Social Networks was divided in two axes: "Hypertension implications in the life of the elderly" and "Hypertension-based links developed". Later on, both axes were divided into five classes, which shall be analyzed next.

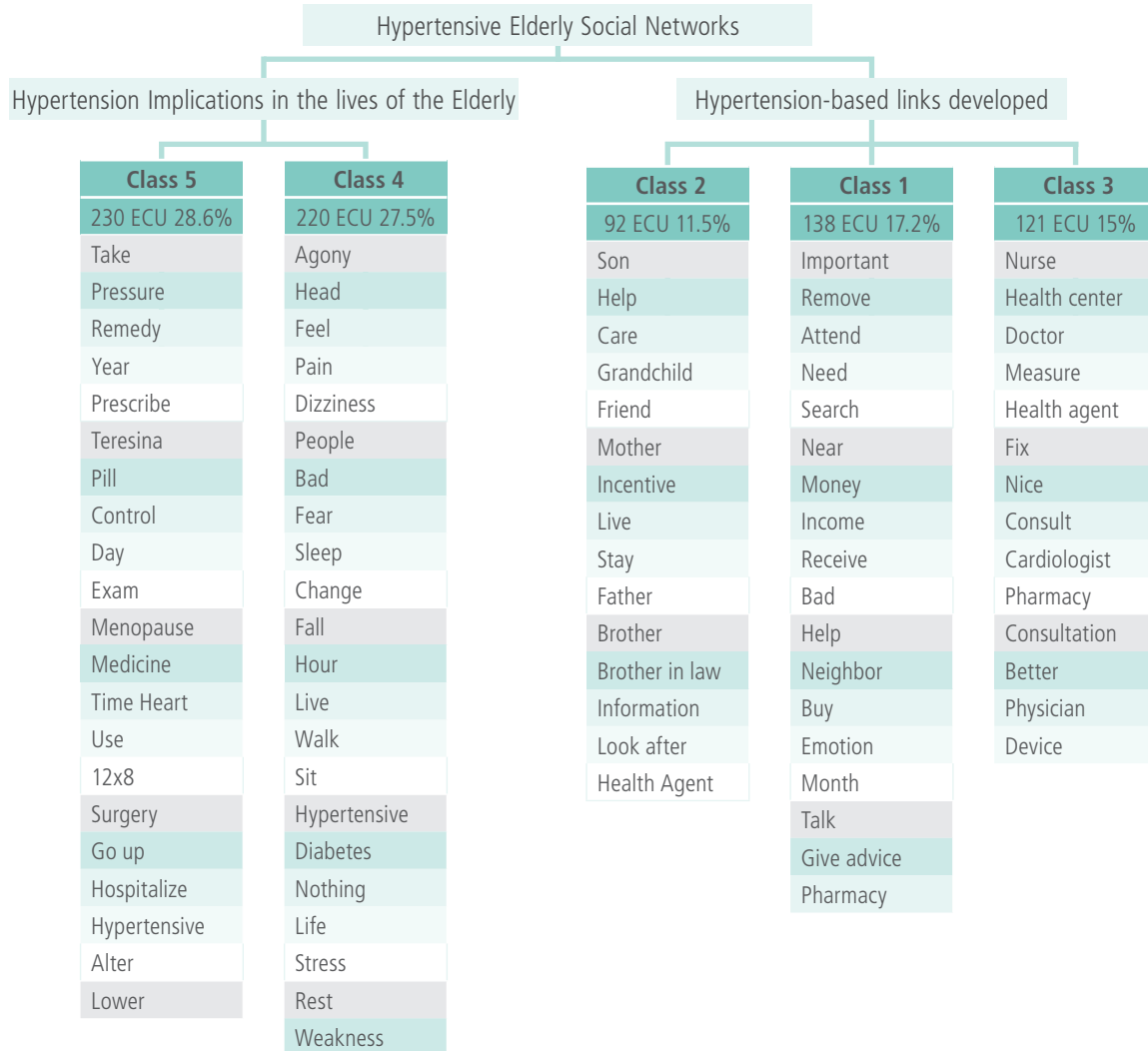
### Class 5. The importance of pharmacological treatment

Class 5 introduces 230 ECU of 801, which represents 28,6% of the corpus. Among the most frequent and significant words in this text segment we can mention; take, remedy, pill, control, medicine and use. This class reflects the importance of pharmacological treatment in the life of hypertensive elderly people, as observed through the following statements:

*We take medicines all day, you know? My wife sometimes gets it at the drugstore but mine is bought at the pharmacy.*

Suj.7.

**Figure 1:** Dendrogram of social networks used by the hypertensive elderly.



*Something that I can't forget is to take my medicine; I take it everyday, fasting. The first thing is to take my medicine, that way I can live longer, right? It's been five years that I take these remedies, my life changed a little bit but I have to take them.*

Suj.5.

*I even live well with high pressure but the point is I have to take medicines every day, I don't like that.*

Suj.17.

The speech analysis of elderly patients demonstrates that the pharmacological treatment is fundamental among the initiatives related to arterial hypertension control. However, this generates a feeling of obligation in these people that will be there permanently, once they depend on it to grant ideal AP levels. This defined and permanent condition is perhaps what causes more anguish and concern, oftentimes generating treatment adherence difficulty.

#### **Class 4. Hypertension signs and symptoms**

The fourth class, responsible for 220 ECU, which accounts for 27,5% of the corpus, brings as the most significant words: pain, head, dizziness, fear,

fall, weakness and change. These words portrait the signs and symptoms related to SAH, as reflected in the following statements:

*(...) Then I started to feel headaches, many times I felt very weak, dizzy, you know? That was when I went to see a doctor, after that everything changed.*

Suj.21.

*It was because of feeling dizzy, having headaches, weakness, these things high pressures provokes.*

Suj.2.

*Sometimes I would feel dizzy and was afraid of falling, you know? I even stopped walking by myself... now I am improving but I have headaches once in a while.*

Suj.25.

With regards to the statements above, it is known that the quality of life of the hypertensive elderly is closely related to an efficient blood pressure (BP) control. Symptoms caused by an insufficient condition control limits the performance of activities considered normal in the past, resulting in difficulties in the personal, financial and social environments. Oftentimes these can lead to a low self-esteem feeling, hopelessness and social isolation.

### **Class 1. Pharmacological treatment challenges**

Composed of 138 ECU, which represents 17,2% of the analyzed corpus, class 1 approaches the main challenges that the hypertensive elderly face due to their pharmacological treatment, as expressed in the following statements:

*We know it is important to keep the money for remedies, right? Every month I have to save money for medicines because sometimes the health center doesn't have them and I can't stay without them.*

Suj.8.

*It's always the same thing, I need to see the doctor to get the medication prescription. I get the prescription and then I go to the pharmacy, it's always like this.*

Suj.14.

*I need to collect my medicine every month, you know? Sometimes I can't go so I ask my neighbor to pick it up for me.*

Suj.3.

*Fortunately the girls at the health center give good advice, they talk about anything... and we know that sometimes they lack medicines so we need to have the money to buy and we don't always have it.*

Suj.23.

It is perceived that the elderly narrate their difficulty with financial costs with their pharmacological treatment and the search for medical prescriptions. Such statements ratify the daily obstacles faced by Single Health System (SUS) users in Brazil, as oftentimes they have to face long lines to get medical assistance, and when assisted, they need to buy expensive medication, which is not totally covered by public health centers.

### **Class 3. Professionals that promote hypertensive elderly care**

It is important to highlight the most remarkable words in class 3, responsible for 129 ECU, which accounts for 15% of the corpus: nurse, doctor, health agent, cardiologist and physician. This class represents the formal social network composed of health professionals that offer effective assistance to the patients under their responsibility, as expressed through the following statements:

*The girl there, the nurse, I don't know her name, I don't know if she's a nurse or a doctor, as she's been there for a short time but she's very important (...) she's the health agent (...)The health agent was the one who helped me the most, she helps you out with anything you need, she gives you the medication, sometimes she even gets it at the health center and leaves it there, she always tells us to go to the health center when we have to, to go to the consultations, take all the exams, all that!.*

Suj.2.

*"This doctor at that health center is very good, every time I go there he asks how I am, if I am feeling dizzy, that kind of thing (...) He writes me a prescription, talks, he gives advice, he's really good, everyone there is.*

Suj.10.

*One goes there to get prescriptions and is well received. Even the girl who writes the names is nice, always smiling, the nurse is also good, the doctor is great, everything's fine there, we are very lucky, you know?!*

Suj.5.

*The most important one is the health agent, she's always encouraging us and giving advice, she comes here every month.*

Suj.8.

It seems important to also remark the key role played by the community health agent (CHA) who, together with nurses and doctors, develops assistance relationships that seek to grant the quality of life and health promotion for the population within the FHS context. According to the elderly patients' perception, these are the professionals who best understand their real needs, considering they have direct contact with them in the health center units.

## Class 2. Axes that strengthen care

Responsible for 11.5% of the corpus, equivalent to 92 ECU, this class highlights the following words: son, help, care, grandchild, friend and mother, thus mentioning the people who are mostly involved in the care of the hypertensive elderly in their diverse contexts, as shown by the statements below:

*My son helps me a lot, you know? He is very concerned about me, everybody at home is (...) they think I can pass away anytime but I have so much faith in God!*

Suj.4.

*Fortunately, I have many friends, thank God" My grandchildren help me a lot, almost every night there is one of them spending the night with me, I think that's great because I don't have to spend the night alone... (...) Some days I forget to take my medicines but they remind me, so it's very good.*

Suj.14.

When analyzing the statements above it is necessary to highlight the significance of personal relations in the context of the hypertensive elderly care. We must also mention the importance that social networks have in people's lives, especially for those who coexist with a chronic condition such as SAH.

## Discussion

The results of some studies converge with the hypertensive elderly interviewed in this research, as they point at an overvaluation of pharmacological treatment in recent years, which directly interferes with the treatment adherence of hypertensive patients in general [18, 19]. The fact is that taking medicines permanently generates physical, psychological and financial consequences that directly affect the quality of life of patients and their families [20].

Pharmacological treatment adherence, especially in the case of chronic conditions, constitutes a complex process that requires a sudden adaptation, oftentimes to a new lifestyle and to the concomitant adoption of healthy living habits. This process directly affects the family, as well as the social, economic and cultural context of each individual and involves different factors of individual and collective nature [19].

In this context, it is important to remark the relation between health professionals and clients, seeking to understand the patient in its most diverse aspects, seeking to offer them comprehensive assistance. It is known that higher levels of patient insertion in the health-sickness process, as well as treatment commitment, result in more benefits for an effective treatment adherence, also implying a more satisfactory compliance with the goals set for the involved parties [18].

In the context of chronic conditions, interactions generated through social networks result in an improvement in the patients' health, mainly in those who suffer from an additional damage caused by the disease, directly affecting treatment adherence. Therefore, this can be considered as a strategy to improve the patients' quality of life [21].

Social networks, with their extensive information exchange dynamics, constitute a fundamental tool to face health acute or chronic conditions and problems in modern society, once they permit an ongoing interaction among people and as a consequence, the development of initiatives seeking to reach collective goals [12].

This way, it is important to highlight that the family, neighbors and friends represent an informal social network, constituting most of the times, a sort of supporting network that grants safety and encouragement to face the treatment of chronic conditions and other vulnerabilities. Having this support may sometimes determine treatment success and a faster recovery, as the absence of such relations may generate challenges, constraints and/or

hopelessness for people in a more fragile health condition, as it is the case of the hypertensive elderly [21].

In the arterial hypertension scenario, and especially in the FHS environment, which is seen as the first step to other care levels, we must mention the remarkable routine work developed by physicians and nurses seeking to grant a comprehensive assistance, as well as to promote health quality among the population in general [22, 23].

It is important to highlight that based on the described statements, although the biomedical knowledge and mechanical initiatives reflected in medical prescriptions are quite valued, we can also perceive the notorious relevance of the personal relations developed between the elderly and the health team professionals, especially with the nurse and the CHA, who are clearly the ones that spend the most time with the patients [24].

Nursing has in the FHS, an useful tool to develop care practices not just aimed at offering care, but also for the management of human and material inputs, gaining growing visibility and being often responsible for the success of initiatives that consider community health as a whole, as well as the development of links between the communities and health professionals, mainly through the development of practices that include health education [25].

It is important to highlight however, that the role of the nurse in the assistance aspect does not take place in an isolated manner, as the FHS is characterized by the development of initiatives that involve a multidisciplinary team, based on strategies aimed at the collective interest. In the care of hypertensive patients, such quality is all the more evident, once these people have certain peculiarities that make them need permanent follow-up from multiple professionals, as those who compose the basic FHS team: doctor, nurse, nursing technician and CHA [5].

Progress made related to treatment and control of arterial hypertension is acknowledged, although

it is still quite common that HAS patients, especially adults, seek health centers motivated by blood pressure alterations resulting from inadequate ambulatory control [7], thus reinforcing the need for the FHS team, mainly the nurse, to learn about the real health needs of the population they are responsible for and based on these, plan an assistance aimed at the peculiarities of each case.

Therefore, it is important to get familiar with the hypertensive elderly social networks, once they represent a support system in moments of fragility and/or difficulty faced by this group of people. It is believed that the social networks formed based on the care offered to the hypertensive elderly, regardless of being user-family-friends relations or user-professional relations, favor a better coping with their chronic condition, thus improving treatment adherence.

It is fundamental that FHS professionals, especially nurses, doctors and CHA (professionals who are in charge of care initiatives) (Re) get familiar with each elderly patient's social network and their importance in health care development, as they enable to establish links and goals seeking to reach better results in hypertension treatment and control.

## Conclusion

The formal and informal social networks of the hypertensive elderly researched are formed by family health strategy professionals such as nurses and doctors, besides relatives, neighbors and friends that become essential in the care process due to the ongoing support and safety that they offer.

Relations established by the hypertensive elderly reveal the key role the pharmacological treatment plays in the construction of social networks, however negatively affecting their perceptions on health assistance and therapeutic adherence.

Based on the actors' knowledge on the social networks unveiled by the elderly, nurses must plan assistance including initiatives to be developed

at home, which involve the elderly patient's daily routine, thus requiring a change of habits and the adoption of healthy practices.

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