

## Social representation of elderly people on falls: structural analysis and in the light of Neuman

*Representação social de pessoas idosas sobre quedas: análise estrutural e à luz de Neuman*

*Representación social de ancianos sobre caídas: análisis estructural ya la luz de Neuman*

Jéssica de Castro Santos<sup>1</sup>, Cristina Arreguy-Sena<sup>1</sup>, Paulo Ferreira Pinto<sup>1</sup>,  
Elenir de Paiva Pereira<sup>1</sup>, Marcelo da Silva Alves<sup>1</sup>, Fabiano Bolpato Loures<sup>1</sup>

<sup>1</sup> Universidade Federal de Juiz de Fora. Juiz de Fora, Minas Gerais, Brazil.

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### ABSTRACT

**Objective:** To understand the symbolic elements and the hierarchical system of representations of elderly people on falls, according to Abric's structural analysis and Neuman's theory. **Method:** Abric structural approach developed at the home of primary care users in a city of Minas Gerais. A free evocation technique of images triggered by images was performed in 2016 with elderly individuals ( $\geq 65$  years old). Data treated by dictionary of equivalent terms; processed in Evoc 2000 software converging, analytically, according to Neuman. Ethical/legal criteria were met. **Results:** 195 people participated, 78.5% were women, and 45.1% were aged  $\geq 75$  years. Summarized 897 words; 155 different ones. Central nucleus containing cognates: dizziness-vertigo-labyrinthitis and slipper-shoes (behavioral and objective dimension). The word disease integrated the area of contrast. Environmental and personal stressors were identified according to Neuman. **Final considerations:** Objects and risk behaviors for falls integrated the representations, although environmental and personal stressors indicate the need for preventive interventions in the environment and in the intrapersonal dimension.

**Descriptors:** Accidents by Falls; Elderly; Risk Factors; Nursing Theory; Social Psychology.

### RESUMO

**Objetivo:** Compreender os elementos simbólicos e o sistema hierárquico das representações de pessoas idosas sobre quedas, segundo análise estrutural de Abric e teoria de Neuman. **Método:** Abordagem estrutural de Abric desenvolvida no domicílio de usuários da atenção primária numa cidade de Minas Gerais. Realizou-se técnica de evocação livre de palavras desencadeadas por imagens em 2016 com idosos ( $\geq 65$  anos). Dados tratados por dicionário de termos equivalentes; processados no software Evoc 2000 convergindo analiticamente, segundo Neuman. Atendidos critérios éticos/legais. **Resultados:** Participaram 195 pessoas, 78,5% eram mulheres, sendo 45,1% com idade  $\geq 75$  anos. Evocadas 897 palavras; 155 distintas. Núcleo central contendo cognemas: tonteira-vertigem-labirintite e chinelo-calçado (dimensão comportamental e objetiva). A palavra doença integrou a área de contraste. Foram identificados estressores ambientais e pessoais segundo Neuman. **Considerações finais:** Objetos e comportamentos de risco para quedas integraram as representações, embora estressores ambientais e pessoais indiquem necessidade de intervenções preventivas no ambiente e na dimensão intrapessoal.

**Descritores:** Acidentes por Quedas; Idoso; Fatores de Risco; Teoria de Enfermagem; Psicologia Social.

### RESUMEN

**Objetivo:** Comprender los elementos simbólicos y el sistema jerárquico de las representaciones de personas mayores sobre caídas, según análisis estructural de Abric y teoría de Neuman. **Método:** Enfoque estructural de Abric desarrollada en el domicilio de usuarios de la atención primaria en una ciudad de Minas Gerais. Se realizó técnica de evocación libre de palabras desencadenadas por imágenes en 2016 con ancianos ( $\geq 65$  años). Datos tratados por el diccionario de términos equivalentes; procesados en el software Evoc 2000 convergiendo analiticamente, según Neuman. Atendidos criterios éticos/legales. **Resultados:** Participaron 195 personas, 78,5% eran mujeres, siendo 45,1% con edad  $\geq 75$  años. Evocadas 897 palabras; 155 distintas. Núcleo central que contiene cognemas: tonteira-vertigo-laberintitis y zapato-calzado (dimensión comportamental y objetiva). La palabra enfermedad integró el área de contraste. Se

identificaron estresores ambientales y personales según Neuman. **Consideraciones finales:** Objetos y comportamientos de riesgo para caídas integraron las representaciones, aunque estresores ambientales y personales indiquen necesidad de intervenciones preventivas en el ambiente y en la dimensión intrapersonal.

**Descriptores:** Accidentes por Caídas; Ancianos; Factores de Riesgo; Teoría de Enfermería; Psicología social.

**CORRESPONDING AUTHOR** Jéssica de Castro Santos E-mail: jessicacastroenf@gmail.com

## INTRODUCTION

The proportion of older people in Brazil rose from 9.8% to 14.3% between 2005 and 2015<sup>(1)</sup>; this exceeds the percentage of elderly people estimated in 2010, which foresaw a proportion of 14.1% of the total population by the year 2025<sup>(2)</sup>.

When analyzing the impact of the aging process on the population, it is possible to predict the increase of chronic-degenerative diseases and an intensification of exposure/vulnerability of these people to accidents by falls<sup>(3-4)</sup>.

The falls among elderly people in the period of 2005 and 2010 were responsible for 399,681 hospitalizations. The amount spent with AIH (Hospital Admissions Authorization Form) was R\$ 464,874,275.91. These figures show a growth of 57.7% when compared to 2005 and 2010<sup>(5)</sup>. Falls are included among the factors causing deaths due to external causes according to the Department of Information Technology of the SUS (DATASUS) with a record of 11.3% of this event among people aged  $\geq 60$  years in the year 2011<sup>(6)</sup>.

This is because the impairment of the functionality impacts the independence and changes in mobility, besides being a situation of vulnerability for new events that are shown as manifestations of the geriatric syndrome<sup>(7-8)</sup>.

There is (inter) national evidence that risk factors by falls are multifactorial and may include: previous history of two or more annual falls; age  $\geq 65$  years; use of polypharmacy; changes in the gait, balance; reduction of visual acuity; emergence of muscle weakness and cardiovascular disease; vertigo; arthrosis; urinary incontinence, delusions, among others<sup>(9-17)</sup>. They can impact income, medicalization, emotional stress, and generate dependency and compromise social and family life<sup>(18-19)</sup>.

The occurrence of falls in the elderly causes personal, relational and financial consequences. From a personal point of view, they cause psychological damage manifested by fear of falling, by insecurity to wander, by functional decline, by the onset of depression; and physical limitations due to abrasions, bruises, fractures and trauma<sup>(20)</sup>.

From a relational perspective, they intensify their dependence on functional disabilities and motivate social isolation<sup>(20-21)</sup>. From a financial point of view, they motivate and intensify hospitalizations and the treatment will burden the personal and/or family budget<sup>(21-23)</sup>, in addition to being able to generate death as an outcome.

Considering that the presence of carpets scattered on the floor (kitchen, living room, bathroom, bedroom), furniture and objects in excess and low illumination are recognized as the environmental components that most cause falls in the elderly and make them vulnerable<sup>(15)</sup>, the need to include cultural and/or individual components in the structuring of nursing care planning in the prevention of falls is considered as a gap.

In order to direct the look of this research to the possibilities of nurses acting on the analysis of the probability of falls in elderly people, we chose to use two theoretical foundations. The first foundation was Betty Neuman's Theory. It is structured in the conceptions of the General Theory of Systems proposed by Von Bertalanfy and Lazlo in all systems, according to Chardin and Cornu and in Selye and Lazarus's Theory of Stress<sup>(24)</sup>. And the second was the structural approach according to Abric's proposal based on the theory of Social Representations<sup>(25)</sup>.

Among the concepts proposed by Neuman, the individual is conceived as a system of integrative forces that protects him from stress situations of external/internal origin through energy fields called energy lines that have levels of flexibility that allow him to be characterized as an open energy system<sup>(24)</sup>.

The nurses act as a possibility to maintain the balance of this energy system and to seek the stabilization of the health-disease process by identifiable demands or not. This action occurs in the primary, secondary and tertiary care levels with objectives articulated to their work function, which is the justification for the study, since the aging process requires nursing to prepare, creating studies, scenarios and spaces for discussions related to the care of the elderly<sup>(24)</sup>.

At the primary level, the objective is to prevent stressors reaching the flexible line of defense from reaching deeper levels of the individual. At the secondary level, as the normal lines of defense were reached, and therefore, people can already identify the occurrence of a problem in itself, what is sought is to curb this action by eliminating it or minimizing it to the level of the lines of flexibility at first. At the tertiary level, the goal is to promote treatment and rehabilitation as resistance lines have been reached and this is a threat to the energy system<sup>(24)</sup>.

To integrate these three levels, we aim to focus on the proposed object in order to move towards a broader concept of health, in which the elderly individual (holder of his critical and participatory power) cannot only be scrutinized as a body that can fall, but as an individual who has at risk their citizenship and their humanities.

This research is based on the following argument: the concept of individual and collective risk of falling from the perspective of the elderly and analyzed in the light of the Theory of Systems of Neuman, which helps in directing the nurses' perspective to a therapeutic approach.

## OBJECTIVE

In view of the above, the present research aimed to understand the symbolic elements and the hierarchical system of representations of elderly people on falls, according to Abric's structural analysis and Neuman's theory.

## METHOD

### Ethical aspects

The present investigation met all ethical and legal research requirements involving human beings in Brazil. The project was registered in the Plataforma Brasil (Brazil Platform), submitted to the Research Ethics Committee of the Universidade Federal de Juiz de Fora, with approval on October 27, 2015.

### Theoretical-methodological reference and type of study

It is a matrix research that focuses on the structural approach of the Social Representations Theory (TRS), according to Abric's proposal<sup>(25)</sup>, for the risk of falls in a socially constituted group of elderly people. The perspective adopted to identify the needs of social interventions compatible with nurses' work among elderly people on socially shared contents<sup>(26)</sup>.

### Methodological procedures

#### Hypothesis

Participants constitute a socially contextualized group, composed of people aged  $\geq 65$  years old, living in a neighborhood with Italian immigration, attached to a Primary Health Care Unit (Uaps- Unidade de Atenção Primária à Saúde) and which were approached at home.

#### Study scenario

The study was based on the domicile of people assigned to the Primary Health Care Unit (APS- Atenção Primária à Saúde) of a city of Minas Gerais, where 11.9% of people aged  $\geq 60$  years old and 8.3% of these people make up a group aged  $\geq 65$  years<sup>(2)</sup>.

#### Data source

Eligibility criteria were: to be a resident of the area covered by Uaps; age  $\geq 65$  years; agree to participate as an unpaid volunteer, expressing the acquiescence by signing the Free and Clarified Consent Term and to be lucid and with coherent speech. Potential participants who were hospitalized, moved or were absent during the data collection period were deferred and postponed up to four times the opportunity to integrate the investigation.

Sampling design of complete selection with estimate of 200 participants with prediction of replacement in case of loss  $\geq 10\%$ . There were five losses due to changes in address, deaths and hospitalizations. A total of 195 socially contextualized elderly people participated. Participants were recruited by means of an individual invitation on dates and times previously agreed between the interviewer/participant and the data were collected from February to April 2016.

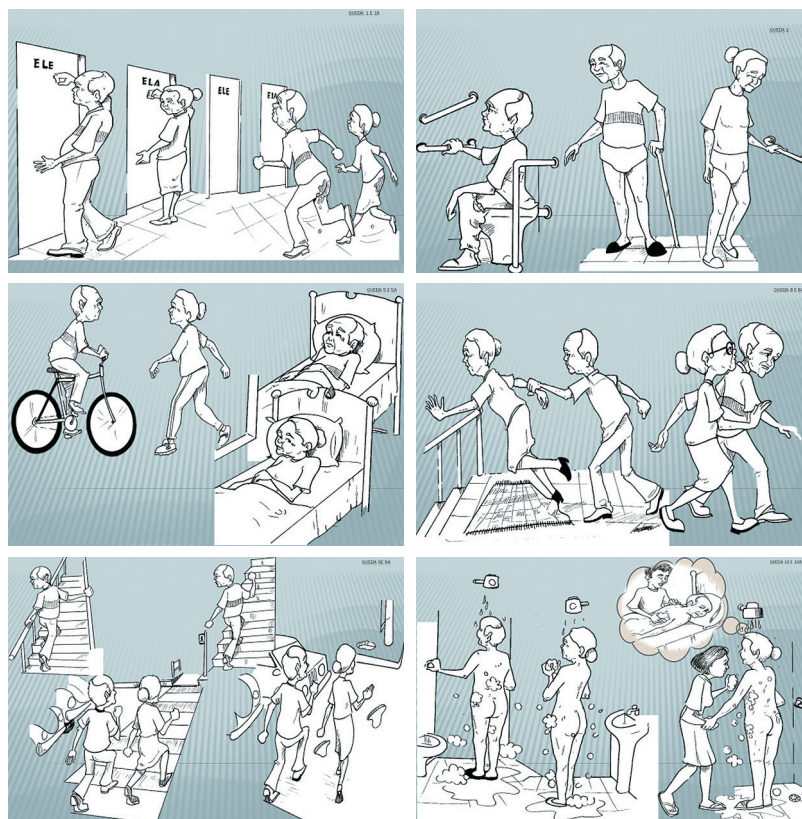
### Collection and organization of data

The technique of free recall of words was used to fill out a questionnaire with socio-demographic data to characterize the sample. The free recall of words consists in asking the participants to mention the first five words that come to mind when the inducer term "can fall" is verbally mentioned.

Considering the low level of schooling and elderly people who, due to the process of human aging, present superficial manifestations of cognitive impairment peculiar to the geriatric syndrome, it was necessary to use the technique of iconization called Free Association of Words Unleashed by Images (TALP-DI- Técnica de Associação Livre de Palavras Desencadeadas por Imagens), as shown in Figure 1.

This technique allowed the use of a figure support containing aspects of negative, positive and neutral values, constructed for research purpose with prior validation in another research<sup>(27)</sup>.

The figures were previously validated regarding the ability to contemplate situations and circumstances in which they portrayed positive, negative and neutral value images as support to subsidize evocation, since elderly people, children and people of low schooling have difficulty using the evocation technique. The neutrality of the colors adopted in the figures was intentional and aimed at reducing biases derived from subliminal communication- al contents, as well as the way of using the figures that were placed in circles aimed at reducing the conception of iconic hierarchies derived from the way they were presented to the participants<sup>(28)</sup>.



Source: Collection of drawings of the research group Technology, Education and Culture in Health and Nursing (TECCSE).

**Figure 1** – Figures used to subsidize evocation for the fall theme

Operational support of the Open Data Kit (ODK) program was used in the android operating system to support the collection of information.

**Data analysis**

To support the prototypical analysis, the following criteria were adopted: the equivalence treatment given to the evocations, the distribution of evoked cognates and the criteria of construction of the quadrants<sup>(26)</sup>.

For the equivalence treatment of the evoked cognates, the equivalent two-step dictionary technique was used. Initially the cognates were treated by the criterion of lemmatization with a view to their homogenization. This allowed the exclusion of prepositions and articles and standardization of words according to gender, number, time and verbal voices. Subsequently, the semantic criterion was used in which the nominal structures were simplified of expressions and approximated by hyphen and similar words were collected in the same category, for example, slippers and footwear<sup>(26)</sup>. To reduce bias, an external researcher made the validation of the approximations, and the dubious cases were not collected.

The homogenized content was introduced in the *Ensemble of Permettant L'analyse des Évocations Programs* (EVOC) in order to obtain the four houses, that is, the allocation of the cognates according to frequency and average order with which they were mentioned by the participants that enabled to identify the probable components of the central nucleus and the hierarchical structure of cognates.

As a criterion for the distribution of the evoked cognates and construction of the quadrants, the Zipf Law was adopted to stipulate the cut-off point of the cognates that composed the data corpus, using the conciliation between the abrupt reduction of the evocation frequency, the stabilization of the value in low frequencies and the achievement of a balance between the presence of cognates evoked in the four quadrants. 897 words were evoked, 155 different words.

The corpus consisted of 38.6% of the content of all evocations, using the following criteria: minimum frequency of 12; intermediate frequency of 21 and rang (calculated by the median of mean recall orders after exclusion of cognates not incorporated in the analysis) of 2.5. After the exclusion of 61.4% of the evocations that had low frequency, a recalculated minimum frequency of 16.9% of the cognates in the upper left quadrant (QSE- Quadrante Superior Esquerdo) and 6.15% in the peripheral elements was obtained, and a balance between the elements allocated in the four quadrants.

The distribution of the evoked cognates formed the "four-frame

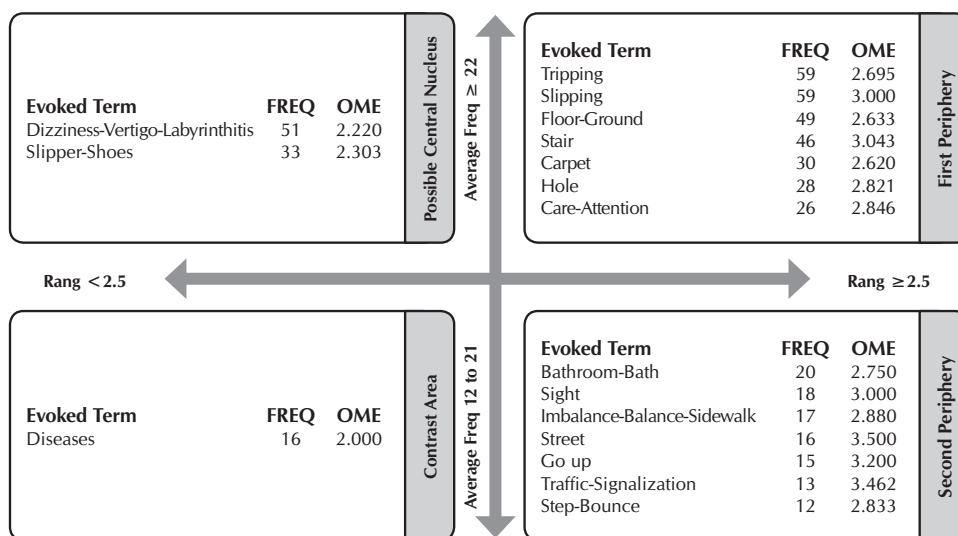
model", which allowed the prototypical analysis of the evocations, that is, the identification of the most readily evoked and mentioned cognates with the highest frequencies possible, according to their allocation in distinct quadrants: elements of the nucleus central, intermediate and peripheral elements, according to allocation in QSE quadrants, where the cognates that compose the possible central nucleus are located; lower left quadrant (QIE- Quadrante Inferior Esquerdo), where the intermediate elements are located; upper right quadrant (QSD- Quadrante Superior Direito) and lower right quadrant (QID- Quadrante Inferior Direito), where the elements of the first and second peripheries are respectively<sup>(29)</sup>.

The rationale for adopting the prototypical analysis is in line with the pretensions of the present research, that is, applicability of the results for the purpose of instrumentalizing the nurse for the structuring of nursing care from the understanding of the social components that integrate common sense about falls. In order to capture the comprehensive dimension of the social phenomenon of falls in the perspective of the elderly, an analysis of the possibilities of movement of cognates within the quadrants was carried out and the flows of social movements were discussed analytically converging these data according to the Neuman's theory. It should be mentioned that the symbolic values and the organization of the constituent elements of the representations found were not the focus of the present investigation.

**RESULTS**

195 elderly people were interviewed, being 78.5% women; 68.6% married, 31.4% lived with partner; 51.7% of the interviewees have children, of these 14.9% have one to three children, 32.6% reported family income ≤ 3 minimum wages and 40.5% did not respond.

The four-frame model is shown in Figure 2. In it is possible to identify the possible central elements allocated in the upper and lower left quadrants.



Source: EVOC 2000 Program

**Figure 2 –** Four-frame model for evocations triggered by the Free Association of Words Unleashed by Images-TALPDI from the inducer term "can fall", Juiz de Fora, Minas Gerais State, Brazil, 2016

## DISCUSSION

The elements allocated to the central nucleus (QSE) assume stability within the system of social representations<sup>(29)</sup>. Thus, what emerges from these evocations refers to reflections that the social representation of the risk of falls among elderly people is related to behavioral (dizziness-vertigo-labyrinthitis) and objective (slipper-shoes) aspects.

As regards the possible elements of the central nucleus, the words "dizziness, vertigo, labyrinthitis" had the highest frequency of recall (51 times) and is second in the rang, showing that were readily evoked by elderly people, having to Marbe's law that uses as a criterion, readiness in recall as relevance of content to the socially contextualized group that integrates<sup>(30)</sup>. These cognates portray behavior and/or organic dysfunction, which is risk for fall.

There is evidence to confirm that dizziness causes a lack of balance, which may result in the outcome of falls among the elderly<sup>(31)</sup>. Because it is a common risk factor among the group, it is noted that the presence of marker elements of the geriatric syndrome is indirectly mentioned, since dizziness-vertigo-labyrinthitis is related to postural instability<sup>(32)</sup>.

The words "slipper-shoes" ranked second among the most evoked words (33 times) and the highest rang, which is to say that their allocation in the central nucleus means that they were the words most readily evoked by the group. The presence of the slipper-shoes objects in the central nucleus refers to the fact that the representation obtained is consolidated among the participants to the point of being objectified.

It should be noted that the risk factors for falls are multifactorial<sup>(33)</sup> and that inappropriate footwear is identified as a behavioral risk factor that is related to the outcome of the event falls among the elderly. Falls can be aggregated with sensory changes and self and heteroperception<sup>(17)</sup>.

The concept about falls, in the conception of the social group, showed a connection with the concept of risk for fall, since in the central nucleus were identified as risk factors for fall, reaffirmed by the objectivation of slipper-shoes and diseases and symptoms expressed by the cognates "dizziness-vertigo-labyrinthitis".

By approaching the representational contents that refer to the risk for falls with the Neuman's theory, it is possible to identify that the nurse can act on the primary lines of defense, since he is able to address issues related to the prevention of falls, regarding to adopt behaviors and guide actions that aim to avoid the occurrence of falls in situations identified among the participants. Nurses can contribute not only to generating and offering information, but also to collaborate so that, with this approach, the elderly can re-signify ways to come and go as a right that is not lost with the advancing age, above all, changes.

The nurse, when observing the socioeconomic conditions and the cultural habits of the elderly, should intervene in order to discourage the use of inappropriate shoes, pointing out the characteristics of the shoes that are safer and therefore less likely to trigger falls. In this sense, the nurse acts on the preservation of the flexible line of defense and on the maintenance of the energy balance system of the participants.

The participants, addressing a physical dysfunction represented by dizziness-vertigo-labyrinthitis referred indirectly to

the markers of geriatric syndrome that can intervene in risks for falls. Thus, according to systems theory, it can be inferred that the nurse can intervene at the tertiary level insofar as it acts on the treatment and rehabilitation in cases in which the morbidity status has already been established.

There is evidence that physical frailty in elderly people can be managed through nursing interventions, which should be related to the control of functional decline from a stimulus for adherence to basic and instrumental activities of daily living<sup>(34)</sup>.

When comparing the images used in the application of the TALPDI technique (Figure 1) with the components allocated in the QSE (dizziness-vertigo-labyrinthitis and slipper-shoes), it was possible to identify that the evocation process performed by the elderly with low schooling did not repeat contents represented in the images.

It is possible to consider that the profile of the elderly involves peculiarities such as polypharmacy and the occurrence of multiple diseases that appear progressively with the passing of the years characterizing a profile of people who tend to have cognitive incapacity as an integral element of the geriatric syndrome<sup>(4,9)</sup>.

TALPDI, as an auxiliary method, favored the process of data collection between the participants' profile using the free association of words and constituted an additional strategy that proved to be useful although "probably the results should be interpreted bearing in mind that are as spontaneous as those generated by the standard technique".

The word "disease" was the only term presented in the lower left quadrant, known as the contrast area. This allocation position corresponds to intermediate elements because it is a word mentioned less frequently, but it has been readily stated. It corroborates what was expressed in the central nucleus, since the elements that manifest the geriatric syndrome were apprehended by the group as a form of illness.

As the aging process is marked by the increase in chronic-degenerative diseases, the drug burden, and the adverse effects of medications are manifestations of geriatric syndromes<sup>(35)</sup>, it was observed that the group associated these factors with diseases by mentioning the risk of falls

In the upper right quadrant (QSD) of the four-box frame are the elements that made up the first periphery. They are cognates that were evoked in high frequency, without being more readily mentioned, what prevented that these elements were allocated in the central nucleus<sup>(36)</sup>.

The objective dimensions (hole, floor-ground, stairs and carpet) and behavioral (tripping, slipping and care-attention) dimensions of the cognates allocated in the QSD, elements that make up the first periphery, are high frequency and not readily mentioned, which prevented that they are allocated in the central nucleus<sup>(36)</sup>.

The cognates "hole", "floor-ground", "stairs" and "carpet" express objects that may be related to the risk of falls depending on the environmental characteristic. People, when mentioning the word "holes", referred to the situation of paving the streets and sidewalks of the city, which, in certain places, present themselves as a circumstance that compromises the safety of passers-by. These become vulnerable to falls,

especially the elderly, who may present postural instability or altered balance due to the geriatric syndrome. These unsafe places can be in or around your homes or in the paths that run through your daily life.

The National Urban Mobility System (Sistema Nacional de Mobilidade Urbana) proposes an organized and coordinated group for the displacement of people in urban territory, involving services, infrastructure and means of transport. The Law nº. 12,587/2012 presents the National Policy on Urban Mobility (Política Nacional de Mobilidade Urbana), which has, among its principles, universal accessibility and safety on journeys. Having a safe and accessible environment for the use of the National Urban Mobility System stands out as a right of people<sup>(37)</sup>.

The “slippery floors”, cited by the participants, are associated with the presence of “stairs” and “carpets” and are mentioned in the literature as risk factors for falls related to the environmental context. There is evidence that the slippery floors represented by the bathroom environment and the presence of carpets at home can lead to falls among elderly people<sup>(13)</sup>.

In a review of the literature on the accessibility of home environments for people with some physical limitation, it was evidenced that the majority of individuals were elderly people  $\geq 70$  years. The findings suggest that older people living in home settings adapted or more accessible to their limitations are more well-off and able to develop basic and/or instrumental activities of daily living, resulting in some health benefits such as falls reduction, decrease in mortality rates, unlike those living in inaccessible environments<sup>(38)</sup>.

Considering the limitations that arise with the geriatric syndrome, the environmental context is considered an intervening factor within the aging process and focusing on the quality of the years to be lived.

There is a recommendation for buildings to consider the health and safety needs of older people by correcting and removing obstacles in the environment that may constitute an increased risk of falls<sup>(18)</sup>.

The terms “care-attention” and “lack of attention-care” present dichotomous behaviors that counteract and which, in the context of everyday activities, may mean increased vulnerability for falls among the elderly.

The terms “slipping” and “tripping” were mentioned with high frequency (both 59 times), a fact that expresses a behavior that integrates the common sense of the investigated group. These cognates translate into risk factors for falls among elderly people of environmental/structural origin, motivated by the presence of objects such as carpets and/or other aspects present in the environment.

It should be mentioned that their presence is not exempt from translating biological/personal risk, since in the process of human aging the occurrence of organic dysfunctions, lack of balance, impairment of gait and loss of visual acuity can motivate and justify the presence two cognates “slipping” and “tripping”. Another factor worth mentioning is the possibility that these cognates are linked to behavioral risks, exemplified by the use of inappropriate shoes and the lack of support objects for ambulation for those who already present postural instability<sup>(39)</sup>.

In view of the above, regarding the elements that form the framework of four houses, when projected to the nurse’s eye in the light of Betty Neuman’s proposal, it is possible to observe, from the evoked cognates that the elderly are able to recognize and identify the external and internal stressors on all power lines. Therefore, it is considered that they are able, in recognition of the stressors, to modify the perception of risks, generating greater security, provided that the therapeutic approach is directed in order to contemplate its sociocultural context.

Neuman presents an associative model applicable to the prevention, treatment and rehabilitation of health, which is compatible in situations of vulnerability to falls in the elderly in the environment in which they are found.

The nurse has the possibility to base the care offered, with a view to soften the origin of the stressors with preventive interventions directed to the environment of the elderly person, in the intrapersonal dimension and acting in the rehabilitation character when the elderly person presents some limitation that exceeds the lines of defense primary.

In analyzing the allocation of cognates in the perspective of the hierarchical system according to the Central Nucleus Theory (Teoria do Núcleo Central)<sup>(25)</sup> and the energy system proposed by Neuman<sup>(24)</sup>, it is possible to identify that the presence of the four objects (floor-ground, stair, carpet and hole) constitute a component that portrays the individual perception of some participants as being part of an environment that presents conditions unfavorable to their safety. This fact points to the possibility that structured educational interventions are potentially favorable for the consolidation of safety behaviors, since they recognize the environmental risks (stressors).

Opposite fact occurs with the cognates (dizziness-vertigo-labyrinthitis and slipper-shoes) that constitute in behavior and object, respectively, consensual collectively and, therefore, difficult to be modified that are inherent in the process of aging. The possible representational components demonstrate that the participants identify intrapersonal stressors (biological risk) and extrapersonal (environments) for which it explicitly expresses their collective and individual perception, albeit at different levels.

### Limitations of the study

As it is an investigation outlined in the qualitative approach of the TRS, it does not allow generalization to socially distinct groups, although it brings as positive contributions the fact of making possible the understanding of situations and risk circumstances of elderly people of a given sociocultural context for the occurrence of fall.

Although the use of TALPDI was a viable, operational and complementary alternative for the collection of data among elderly and low-level participants, it may have been a limiting factor for interpretations of the results when compared to the conventional technique. For the present investigation, to adopt the prototypical analysis, it is recommended the use of basic cognitive schemas as a confirmatory technique for the representational contents.

### Contributions to the area of nursing and public health

The issue of falls is relevant because it is a public health problem that is associated with situations of vulnerability for

which the elderly are exposed and when allied to the use of the TRS approach make it possible to understand that risk for falls is a theme consensualized among the social group studied, to the point of directing the health team's look, in specific of the nursing team for the therapeutic approaches with a view to minimizing the risks for fall.

## FINAL CONSIDERATIONS

The present investigation made it possible to understand the elements that make up the social representation of older people and their hierarchical system for risk of falling in the light of Betty Neuman's reference.

Objects and risk behaviors for falls integrated social representations, although environmental and personal stressors indicate the need for preventive interventions in the (peri) domicile and in the intrapersonal dimension. This population does not recognize them to adopt preventive and therapeutic measures capable of reducing these risks, although it may have the potential to do so.

Therefore, the need for a nursing care based on the Neuman conception is reinforced, in which the nurse is able to act minimizing the external and internal stressors in order to maintain the balance of the energy system of the elderly users and seeking the stabilization of the health-disease process of the elderly in other levels of attention.

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