



REVIEW ARTICLE

NEEDS OF FUNDAMENTAL CARE IN ELDERLY WITH DEPENDENCE ON SELF-CARE IN
LONG-TERM CONTEXT: A SCOPING REVIEW

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ARTICLE INFO

Article History:

Received 05th April, 2017
Received in revised form
13th May, 2017
Accepted 21st June, 2017
Published online 26th July, 2017

Key words:

Self-care deficit,
Needs of long-term care,
Fundamental care.

ABSTRACT

Aim: To identify the fundamental long-term care needs of the elderly, with dependence on self-care.
Materials and Methods: A search was carried out at the EBSCO (CINAHL, MEDLINE, British Nursing Index), Scielo, LILACS, Open Access Scientific Repository in Portugal and Repository of the National Continuous Care Network, using PCC method (Scoping Review). Retrospectively until 2010, from which 17 articles were extracted.
Results: Functional, cognitive and emotional capacity emerge as variables of the competence for self-care. The competence for self-care is influenced by the sociodemographic characteristics and by several determinants: pressure ulcers, polypharmacy, falls and fractures, pain, nutritional status / hydration, respiration, recent hospitalization, behavioral change, depression and states of psychological imbalance, psychotropics, sphincter continence, catheterization / intubation, physical restraint / mechanical restraint, health literacy, infections and polypathology, which interact with each other.
Conclusion: Fundamental care needs in a long-term context have different domains: physical, psychological, financial, supportive, educational and psychosocial. The identification of needs has the potential to contribute to the development of long-term care, with impact on planning, performance and quality of nursing intervention.

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Citation: Ana Filipa Ramos, César Fonseca and Adriana Henriques, 2017. "Needs of fundamental care in elderly with dependence on self-care in long-term context: a scoping review", *International Journal of Current Research*, 9, (07), 53970-53976.

INTRODUCTION

People with 65 years and over are a group with increasing demographic representativeness, that requiring new models of resource delivery, organization and resource allocation (OECD, 2015). At an older age, there is an increased risk of developing chronic and degenerative diseases, which account for more than 50% of the burden of disease, with profound implications in autonomy, utilization of health care and services (OECD, 2011, Yeh et al., 2014). Thus, increasing of dependency situations in self-care and the need to reduce hospitalization time posed new challenges to health teams and families, related to the preparation of discharge. So, long-term care surge as a structured response to the new health and social needs (Rodrigues, Huber & Lamura, 2012). Self-care can be understood as the practice of activities that individuals initiate

and perform for their own benefit, for the maintenance of life, health and well-being (Orem, 2001). However, when the requirements of self-care are greater than the person's ability to develop this self-care, it determines the necessity of professional care. The nurses have the role to mobilize the remaining skills in the person and other professionals.

The implementation of fundamental care based on quality has been associated with improving health service security and reducing the mortality rate (Yeh et al., 2014; Kitson, Athlin & Conroy, 2014; Richards, 2015; Feo & Kitson, 2016). Fundamental care is a set of complex interventions that ensure the person's physical comfort, such as keeping himself clean, warm, nourished, hydrated, adequately dressed, functional and safe, as well as include psychosocial aspects such as feeling calm, respected, involved and dignified (Richards, 2015, Feo & Kitson, 2016). This evidence has contributed to a global movement of concern with research and its integration into nursing practice (Kitson, Athlin & Conroy, 2014, Richards,

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2015, Feo & Kitson, 2016). With this systematic review of the literature we intend to: 1) ascertain the relationship of the sociodemographic profile with the level of dependence in self-care; 2) identify the fundamental care needs of the person with 65 years or over in long-term care.

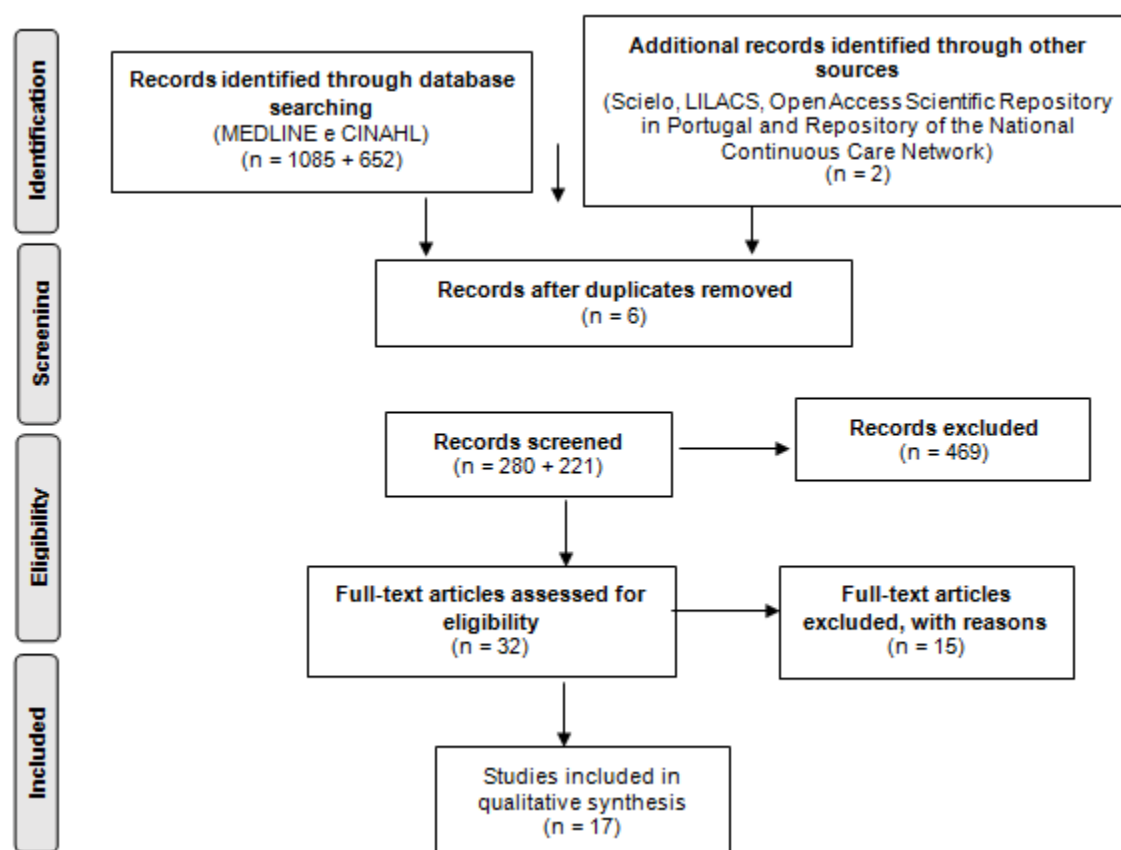
RESEARCH STRATEGY

Firstly, the following question was formulated in the PCC (Population, Context and Concept) format, respectively: In relation to the person with 65 years or over with self-care dependency (P) in a long-term context (C), which fundamental care needs (C)? (JBI, 2015). The electronic database used was EBSCO (MEDLINE with Full Text, CINAHL, Plus with Full Text, British Nursing Index) retrospectively from January 2010 to February 2017. The descriptors were validated in the MeSH (Medical Subject Headings): ("Aged" OR "elderly" OR "functionally-impaired elderly") AND ["needs assessment" OR "nursing" OR "fundamental care" OR "functional residual capacity" OR "self care" AND "long-term care"]. In the databases SciELO, LILACS, Scientific Repository of Open Access in Portugal and Repository of the National Network of Continued Integrated Care the research was guided by: ["aged" AND "needs and demands of health services" AND "long-term care"], with the same temporal delimitation and recognized in the Descriptors in Health Sciences (DeSC). Inclusion criteria were quantitative and qualitative studies, focusing on the identification of nursing care needs of the elderly in long-term context. As exclusion criteria, articles with an unclear methodology, repeated in databases (N = 6), with a date earlier than defined, without correlation with the object of study, literature reviews, editorials and comments were eliminated. In total, a total of 17 articles were obtained, as shown in Flowchart 1.

DISCUSSION

The needs of long-term care increase with disability in basic activities of daily life (ADLs): ingestion, hygiene, dressing, using the toilet, transferring from the bed and walking; older age (> 75/80 years), being single, having dementia or have already suffered from a stroke (Lopes, *et al.*, 2013, Wu *et al.*, 2014). Nagata *et al.* (2013) identify the need of assistance in transference as the most frequent handicap. At the same time, people with respiratory disease and dementia were recognized as the most vulnerable to deterioration in self-care ability. Sung (2014) and Grãto *et al.* (2015) found similar results when detecting the presence of dyspnea, behavioral changes and severe dependence in ADLs, as determinants of risk for mortality. The arterial hypertension and diabetes mellitus are diseases responsible for another comorbidities, which conditioned the capacity for self-care. Individual characteristics such as illiteracy, low educational level and older age were also variables associated with the need to stay in long-term institutions (Yun, Young & Eunhee, 2011; Grãto *et al.*, 2015).

According to Kitamura *et al.* (2010), age ≥ 90 years increases the risk of mortality by 3.3 times more than those aged <80 years. However, the existence of spouses or relatives is a protective factor in the self-care deficit. These findings are also confirmed by the research by Jimenez-Martín and Prieto (2012), who report that, with informal family caregivers, 3.6% are less likely to require long-term care under an institutionalization regime. Nagata *et al.* (2013) alert that elderly care needs increase when informal family caregivers are not adequately prepared or empowered to take the new role.



Flowchart 1. Process of research, selection and critical synthesis of articles From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097

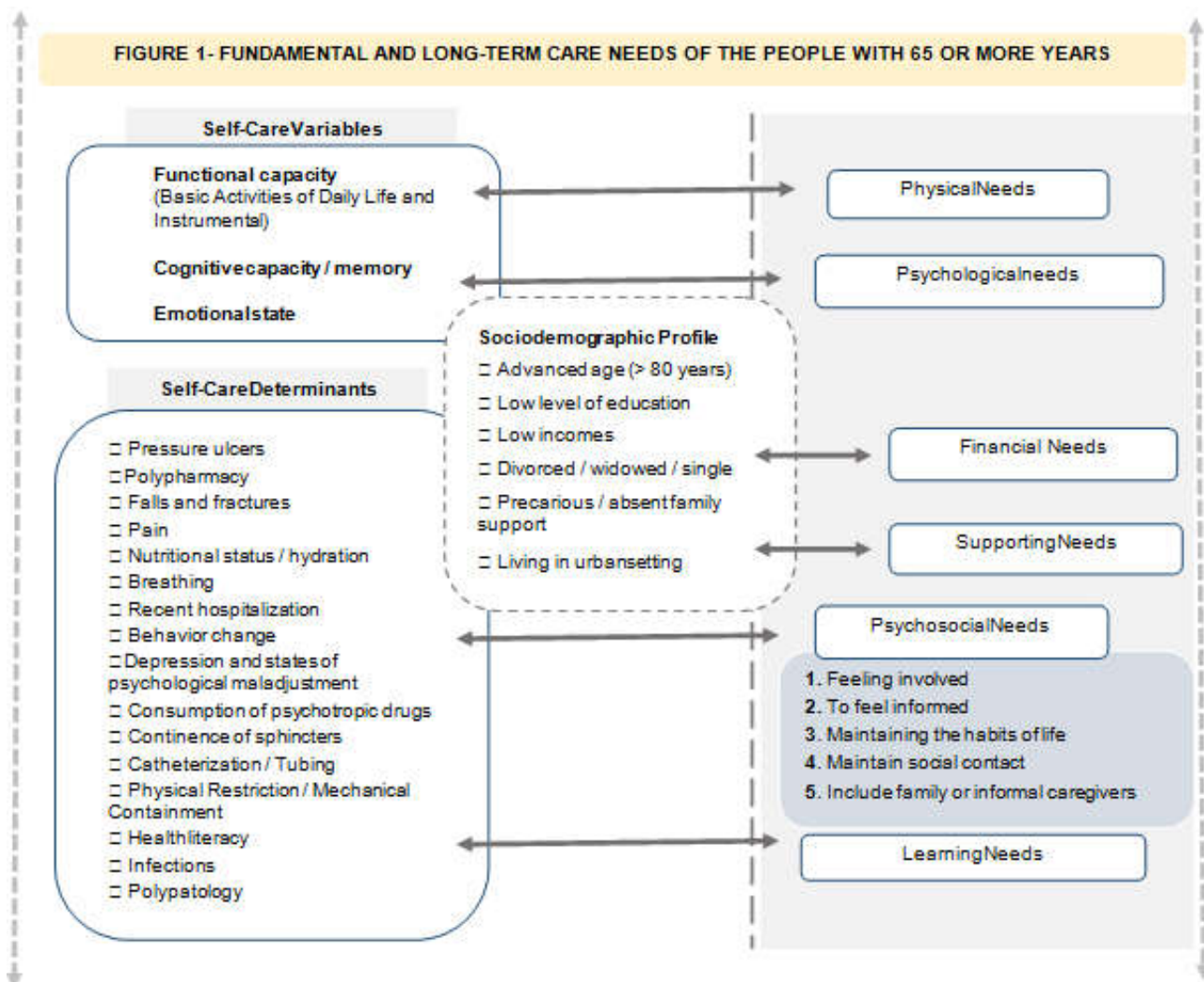
Reference	Type of Study	Population/ Sample	Aim	Fundamental care needs
Ahn <i>et al.</i> (2015)	Retrospective cross-sectional study	41 680 people aged with pressure ulcers, from Database using Minimum Data Set 3.0, USA.	To analyze the relationship between the depth of pressure ulcers and the intensity of pain	After adjusting other variables (such as cognition, dependence on functionality, presence of comorbidities, habitual medication and sociodemographic characteristics), pain intensity increases with the depth of pressure ulcers. Compared with category I (more superficial), pain intensity is 11% higher in category II pressure ulcers, 14% in category III ulcers, 24% in category IV ulcers and 22% in cases of unclassifiable pressure ulcer ($P < .001$).
Gratão <i>et al.</i> (2015)	Descriptive cross-sectional study	37 people aged in a long-term institution in Brazil - São Paulo.	To evaluate the health conditions of the elderly in a Long Stay Institution	Regarding performance in basic daily living activities, the majority is totally dependent (51.4%), and 62.2% have total dependence on instrumental life activities. The elderly with only partial dependence obtained better scores on cognitive performance.
Wu <i>et al.</i> (2014)	Descriptive cross-sectional study	2 608 people aged (1,132 men, 1,296 women) using data from the National Health Interview Survey in Thailand	To analyze the determinants of the use of long-term care in the community and in the institutionalization regime	The elderly with a need for institutionalization are the ones with the lowest education level ($p = 0.019$), single ($p = 0.001$), with a small number of relatives ($p = 0.002$), with a high prevalence rate of incontinence ($p = 0.011$), Dementia ($p = 0.025$) and great disability ($p = 0.016$). After adjusting the variables, age (compared to 65-69 years, 75-79 years, odds ratio [OR] = 2.08, $p = 0.044$, 80 years (OR = 3.30, $p = 0.002$), single (OR = 2.32, $p = 0.007$), have a disability in 1-3 basic activities (OR = 1.68, $p = 0.037$), stroke (OR = 2.08, $p = 0.015$) (OR = 5.56, $p = 0.001$), having disability in 4-6 basic activities of daily living (OR = 21.57, $p = 0.001$) were significantly associated with the need for long-term care.
Duca, Antes & Hallal (2013)	Retrospective cross-sectional study	466 people in long-term care, from 24 long-term institutions in Rio Grande do Sul - Brazil	Check the factors associated with the occurrence of fall in the last year	The prevalence of falls in the last year was 38.9% (95% CI: 34.5 - 43.4), of which 19.2% had as a consequence a fracture. The most frequent fractures were: femur / hip (43.3%) and wrist (10%). In the adjusted analysis, the advancement of age, having functional disability in one to five activities of daily living and having been hospitalized in the last year were the risk factors associated with episodes of falls.
Liu, Weg e Wu (2014)	Study with mixed methods (prospective and qualitative descriptive)	206 people aged evaluated at 3, 6 and 9 months in 95 long-term institutions in Thailand. Half of the participants have 75-84 years.	Identify risk factors and health outcomes of institutionalization of the elderly in long-term care	The risk factors influencing the results were the self-perception of health status and the need for permanent intubation / catheterization. As individual factors were identified the level of education, economic status and quality of family support. Regarding the organizational characteristics, institutions with low beds (<49 beds), with low occupancy rate have greater functional decline compared to larger institutions.
Yun, Young & Eunhee (2011)	Retrospective cross-sectional study	14,369 seniors in 388 long-term care institutions in Korea, through database analysis, from January to July 2008.	To analyze the impact factors on the basic daily activities of the elderly admitted to long-term care	45.4% of the elderly were totally dependent on all items of basic daily living activities. No statistically significant relationships were found with the organizational characteristics. Individual characteristics such as age, frequency of rehabilitation programs, urinary continence, bladder continence, pressure ulcers and presence of catheterization / intubation were predictive factors in the deterioration of functional status.
DePalma <i>et al.</i> (2013)	Mixed study (descriptive retrospective and qualitative)	522 elderly people hospitalized with an interview 90 days after hospitalization episode and analysis of the National Long-Term Care Surveys (NLTCs)	Determine the association between hospital discharge to the community without the diagnose of dependence in ADL's and the probability of readmission	After adjustment of the model for demographic variables, health and functional status, the lack of knowledge about the dependence on ADL at hospital discharge increased 1.37 plus the probability of readmission (HR: 1.37, 95% CI: 1.03-1.82). The risk of readmission is even higher for those with new disabilities during hospitalization (HR: 1.66, 95% CI: 1.01-2.73).
Kitamura <i>et al.</i> (2010)	Prospective descriptive study	205 elderly people living in the community in Japan, beneficiaries of long-term care	Identify the risk factors associated with mortality in the subsequent 2 years	The mean age was 83.6 years. Of the 205 subjects 42 lost their lives during the follow-up period. The results of the bivariate analysis indicated that low scores on the Barthel scale ($p = 0.0017$), low weight ($p = 0.0087$), low body mass index (BMI) ($p = 0.001$), serum hemoglobin levels ($p = 0.0180$) and albumin ($p = 0.0001$) were associated with the occurrence of mortality. The multivariate analysis revealed that BMI <17.1 kg / m ² (adjusted OR = 4.0, $p = 0.0007$) and age ≥ 90 years (adjusted OR = 3.3, $p = 0.0033$) are predictors of mortality.

Continue.....

Onder <i>et al.</i> (2012)	Descriptive cross-sectional study	4,023 people in long-term care, included in the SHELTER project, in 57 institutions in 7 European countries (France, Czech Republic, Ireland, Finland, Italy, the Netherlands) and Israel.	To determine the prevalence and characteristics of people related to polypharmacy in long-term care	Polypharmacy was observed in 2,000 people (49.7%) and excessive polypharmacy in 979 (24.3%). People who took 10 or more drugs had more chronic diseases, such as depression (odds ratio 1.81, 95% confidence interval [CI] 1.38-2.37), pain (OR 2.31, 95% CI 1.80-2.97), dyspnea (OR 2.29, 95% CI 1.61-3.27) and gastrointestinal symptoms (OR 1.73, 95% CI 1.35-2.21).
		Assessment tools: interRAI instrument for long-term care facilities. [No polypharmacy (0-4 drugs), polypharmacy (5-9 drugs) and excessive polypharmacy (≥ 10 drugs)]		
Galik & Resnick (2013)	Descriptive cross-sectional study	419 elderly people in 12 long-term care institutions	Describe the prevalence of psychotropic medication use and its effect on physical and psychosocial outcomes in the elderly	288 of the elderly (69%) had prescribed at least 1 psychotropic drug, of which 19% were antipsychotic, 59% antidepressants, 12% anxiolytics and 9% sedatives / hypnotics. People that taking psychotropic medication have a lower level of physical and psychosocial activity, compared with those who do not take it (F = 3.2, P = 0.01, F = 2.0, P = 0.04)
		Assessment tools: The Barthel Index, The Tinetti Mobility Scale, The Dementia Quality of Life Instrument, Self-Efficacy for Functional Ability Scale, Outcome Expectations for Functional Ability Scale		
Nagata <i>et al.</i> (2013)	Descriptive cross-sectional study	1594 people aged 65 years after hospital discharge in Japan, with at least 14 days of hospitalization	To analyze what nursing care needs unknown to the elderly person after hospital discharge	The identified needs were at the level of daily activities, being more accentuated in people with respiratory disease and in situations where the informal family caregiver is not previously able to help with self-care.
Sung (2014)	Descriptive cross-sectional study	195 elderly people by analyzing the Minimal Data Set of 63 long-term institutions between July 2018 3 June 2012	Identify the factors associated with mortality in long-term institutions	The most important factors were: dyspnea (odds ratio [OR] $\frac{1}{4}$ 4.88), behavior problems (OR $\frac{1}{4}$ 3.95) and dependence on ADLs (OR $\frac{1}{4}$ 3.61). These variables explained 31.1% of the mortality variance.
		Assessment tools: Korean MDS evaluation items		
Boelsma <i>et al.</i> (2014)	Qualitative	16 elderly people in 7 long-term institutions	Explore which aspects to improve in long-term care from the perspective of the elderly	Nine aspects were identified as important for improving quality of life: feeling of belonging to a community, feeling at home, social contact with others in long-term care, independence, maintaining life habits, existence of involvement of informal caregivers, being informed, feeling safe and feeding, according to individual preferences.
		Assessment tools: Mini Nutritional Assessment (MNA), Mini-Mental State Examination (MMSE), Barthel Index (BI) e Activity Daily Living (ADL).		A significant correlation was found between cognitive and nutritional status (p= 0.001). Follow-up demonstrated a strong relationship between cognitive impairment, functional decline, and mortality (p= 0.01).
Malara <i>et al.</i> (2014)	Prospective descriptive study	174 elderly people in long-term care in Italy	Analyzing the association between cognitive deterioration and nutritional status in a long-stay institution	
		Assessment tools: Mini Nutritional Assessment (MNA), Mini-Mental State Examination (MMSE), Barthel Index (BI) e Activity Daily Living (ADL).		
Lopes <i>et al.</i> (2013)	Descriptive cross-sectional study	903 elderly people, in the community in Portugal	Assessing the functionality of the elderly	Food needs (18.7%), housing (19.2%) and health (26.0%) were found to be unsatisfied. 58% of the elderly report an intensity of pain requiring care and 73.3% of the elderly do not have functional dentition. There is a progressive decrease in functionality as age progresses. However, independency is largely preserved <75 years.
		Assessment Tools: International Classification for Functionality		
Mestre <i>et al.</i> (2015)	Report of a Committee of Experts	-----	Identify a set of areas for improvement in the performance of long-term care in Portugal	For the provision of care focused on the integral assessment of the individual's needs, their capacities, their well-being, with goals of global recovery, rehabilitation and promotion of autonomy is suggested to monitor certain indicators
Lee <i>et al.</i> (2015)	Mixed study (descriptive retrospective and qualitative)	171 people with dementia (DSM-IV diagnosis) aged (mean age = 83.64), with no dependence on wheelchair locomotion.	Evaluate the relationship between self-report of pain and the psychological well-being	44% of people reported pain one or more times during the 12 hours of observation. People with pain had more negative expressions, compared to the rest. Pain assessment is recommended in people with moderate to severe dementia, as it interferes with psychological well-being.
		Assessment tools: <i>Observable Displays of Affect Scale (ODAS)</i>		

The transition from the hospital to the home is a complex and problematic situation for some elderly people, especially when a new situation of dependency occurs or the previous dependence is aggravated, without a sufficient diagnosis of their needs of self-care. Older people feel that they are not receiving the necessary help, and the inadequacy of this diagnosis leaves people more vulnerable to hospital readmission. Thus, recent hospitalization is considered a precipitating factor to the long-term care needs (DePalma *et al.*, 2013, Nagata *et al.*, 2013). The presence of incontinence, pressure ulcers and the intubation/ catheterization for feeding and/ or elimination were interpreted by Yun, Young & Eunhee (2011) and Liu, Weg & Wu (2014) as risk factors for functional decline. The elderly person with functional disability in one to five activities has a high risk of falling, compared to those who are independent or totally dependent (Duca, Antes & Halla, 2013). This studies points out the importance of nursing intervention in promoting and maintaining independence in self-care.

as a limitation of the capacity for self-care. Kitamura *et al.* (2010) identify nutritional status as a variable of significant influence on care needs, as body mass index (BMI) < 17.1 kg / m² increases the propensity for mortality in relation to people with a BMI > 22.1 kg / m². In parallel, Malara *et al.* (2014) conclude that 56% of elderly with severe cognitive impairment are at risk for nutritional deficits, being more susceptible to functional decline and mortality. Lopes *et al.* (2013) also points out that, most of the elderly do not have a functional dentition, which may compromise adequate nutritional intake. For Onder *et al.* (2012), excessive polypharmacy (i.e. taking 10 or more drugs per day) contributes to the growth of presence of another symptoms, such pain, dyspnea and gastrointestinal disorders. In these cases, a large number of concomitant chronic diseases are also associated, like ischemic heart disease, heart failure, parkinson's disease, stroke, diabetes mellitus and cancer. Laxatives formed the most consumed pharmacological group (41.8%), followed by gastric protectors (40.8%), aspirin and antiplatelet agents (37.7%).



Nevertheless, factors that influence self-care are complex and form clusters that are difficult to separate, such as pressure ulcers and pain. According to Ahn *et al.* (2015), the association of pain intensity with depth of pressure ulcers is a present phenomenon, which can be explained by the presence of nociceptive receptors at the level of muscle and bone tissue, which is destroyed in the presence of category pressure ulcers IV. Lopes *et al.* (2013) and Lee *et al.* (2015) through their investigations indicate the presence of moderate to severe pain,

The use of psychotropic drugs was present in more than 1/3 of the people, which include benzodiazepines (36%), antidepressants (35.6%) and antipsychotics (26.4%). Elderly people with less dependency on ADL and less cognitive deterioration take more drugs, which was related to the high prevalence of depression. However, the significant use of benzodiazepines to treat anxiety and depression may rise functional decline and the risk of falls and fractures. Similar results were found by Galik and Resnick (2013) to conclude

that those who take psychotropic medication have a considerable reduction in physical performance, with affection of posture and balance, as well as decreases the feeling of self-efficacy and quality of life. According to Mestre *et al.* (2015), individuals with alterations in communication, dehydration, infections, need for physical restraint/ mechanical restraint and experiencing adverse reactions to medication are in a situation of increased susceptibility. People who are 65 years of age and older, when questioned about their own care needs, considered it essential to have social contact between them, to be informed, to feel involved, to maintain or achieve independence, to preserve habits and the presence of informal family caregivers (Boelsma *et al.*, 2014).

Conclusion

Functional, cognitive and emotional capacity are three variables that seem to be constituents of competence for self-care, with a dynamic relation of interconnection between them. The socio-demographic profile of the elderly person has a relevant effect on how can lead with the situation of dependence, can be a facilitator or inhibitor agent, as shown in Figure 1.

The literature points to several determinants that influence the capacity for self-care that, consequently, shape essential care needs. Determinants often arise in association, such as polypharmacy, polypathology, anxiety / depression, and adverse effects on medication. The consumption of psychotropic drugs, especially benzodiazepines, was related to changes in balance and posture, which increased the predisposition for falls and fractures. Changes in respiration/ dyspnea, infections and poor health literacy were associated with hospital admission / readmission. The presence of pressure ulcers, pain, malnutrition, dehydration and the need for bladder catheterization and gastric intubation were considered determinants of a higher level of dependence. By knowing the determinants that interfere with the functional, cognitive and emotional capacity of the elderly and how they behave, it is easier to predict fundamental care needs based on the deficit of self-care (light to severe) and plan nursing interventions. Essential care needs in a long-term context are at the physical, psychological, financial, supportive, learning and psychosocial levels.

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