

## RISCO DE LESÕES POR PRESSÃO EM IDOSOS NO DOMICÍLIO

## RISK OF PRESSURE ULCERS IN THE ELDERLY AT HOME

## RIESGO DE LESIONES POR PRESIÓN EN ANCIANOS DEL HOGAR

Isabel Cristina Sibalde Vanderley<sup>1</sup>, Bárbara Angélica Bispo Fernandes do Nascimento<sup>2</sup>, Laís Campelo de Moraes<sup>3</sup>, Camilla Valeriano Cazuza de Souza<sup>4</sup>, Glacineide Cecília dos Santos<sup>5</sup>, Germanna Yamina Ribeiro de Sousa Moraes<sup>6</sup>, Sandra Brotto Furtado Ehrhardt<sup>7</sup>

### RESUMO

**Objetivo:** analisar os fatores associados ao risco de desenvolvimento de Lesões por Pressão nos idosos atendidos pelo Serviço de Atenção Domiciliar. **Método:** trata-se de um estudo quantitativo, descritivo, do tipo transversal, realizado no Serviço de Atenção Domiciliar com pessoas maiores de 60 anos. Realizou-se a coleta dos dados por meio de questionário sociodemográfico e clínico semiestruturado e Escala de Braden. Analisaram-se os dados a partir do Teste Exato de Fisher e a Razão de Verossimilhança com nível de significância de 5%. **Resultados:** observaram-se associações entre o risco de desenvolvimento de Lesão por Pressão e a escolaridade ( $p=0,001$ ), renda ( $p=0,024$ ), idosos acamados ( $p<0,001$ ), portadores de Síndrome de Imobilidade ( $p<0,001$ ), diagnóstico de úlcera vascular ( $p<0,001$ ), Acidente Vascular Encefálico ( $p=0,009$ ) e Demência ( $p<0,001$ ). **Conclusão:** evidenciou-se que diferentes fatores interferem no risco de desenvolvimento de Lesão por Pressão nos idosos, sobretudo como resultado de fatores individuais e sociais. **Descritores:** Lesão por Pressão; Idoso; Saúde do Idoso; Assistência Domiciliar; Serviços de Assistência Domiciliar; Enfermagem Domiciliar.

### ABSTRACT

**Objective:** to analyze the factors associated with the risk of developing Pressure Ulcers in the elderly assisted by the Home Care Service. **Method:** This is a quantitative, descriptive, cross-sectional study, carried out at the Home Care Service with people over 60 years old. Data was collected using a semi-structured sociodemographic and clinical questionnaire and the Braden Scale. The data was analyzed using the Fisher's Exact Test and the Likelihood Ratio with a significance level of 5%. **Results:** associations were observed between the risk of developing Pressure Ulcers and education ( $p=0.001$ ), income ( $p=0.024$ ), bedridden elderly ( $p<0.001$ ), patients with immobility syndrome

( $p < 0.001$ ), diagnosis of vascular ulcer ( $p < 0.001$ ), stroke ( $p = 0.009$ ) and dementia ( $p < 0.001$ ). **Conclusion:** it was evidenced that different factors interfere in the risk of developing Pressure Ulcers in the elderly, mainly as a result of individual and social factors. **Descriptors:** Pressure Ulcer; Aged; Health of Elderly; Home Care; Home Care Services; Home Nursing.

## RESUMEN

**Objetivo:** analizar los factores asociados al riesgo de desarrollar Lesiones por Presión en los ancianos atendidos por el Servicio de Atención Domiciliaria. **Método:** se trata de un estudio cuantitativo, descriptivo, transversal, realizado en el Servicio de Atención Domiciliaria con personas mayores de 60 años. Los datos se recogieron mediante un cuestionario sociodemográfico y clínico semiestructurado y la Escala de Braden. Los datos se analizaron mediante la prueba exacta de Fisher y la razón de verosimilitud con un nivel de significancia del 5%. **Resultados:** hubo asociaciones entre el riesgo de desarrollar Lesión por Presión y educación ( $p = 0,001$ ), ingresos ( $p = 0,024$ ), ancianos postrados en cama ( $p < 0,001$ ), pacientes con Síndrome de Inmovilidad ( $p < 0,001$ ), diagnóstico de úlcera vascular ( $p < 0,001$ ), derrame cerebral vascular ( $p = 0,009$ ) y demencia ( $p < 0,001$ ). **Conclusión:** se evidenció que diferentes factores interfieren en el riesgo de desarrollar Lesión por Presión en el adulto mayor, principalmente como resultado de factores individuales y sociales. **Descriptores:** Úlcera por Presión; Anciano; Salud del Anciano; Atención Domiciliaria de Salud; Servicios de Atención de Salud a Domicilio; Cuidados de Enfermería em el Hogar.

---

<sup>1</sup>Federal University of Pernambuco/UFPE. Recife (PE), Brazil. <sup>1</sup> <https://orcid.org/0000-0003-0372-9481> <sup>2</sup>University of Pernambuco/UPE. Recife (PE), Brazil. <sup>2</sup> <https://orcid.org/0000-0002-5650-350X> <sup>3,4,5,6,7</sup>Professor Fernando Figueira Institute of Integral Medicine. <sup>3</sup> <https://orcid.org/0000-0002-0316-5498> <sup>4</sup> <https://orcid.org/0000-0003-2635-3202> <sup>5</sup> <https://orcid.org/0000-0003-1403-7907> <sup>6</sup> <https://orcid.org/0000-0002-2204-9097> <sup>7</sup> <https://orcid.org/0000-0003-4285-1009>

\* Article extracted from Residency Completion Project in Health of the Elderly << Specialization in Health of the Elderly. Professor Fernando Figueira Institute of Integral Medicine /IMIP, 2018

### How to cite this article

Vanderley ICS, Santana ADS, Nascimento BABF, Morais LC, Souza CVC, Santos GC, et al. Risk of Pressure Ulcers in the Elderly at Home. J Nurs UFPE on line. 2021;15(2):e244597 DOI: <https://doi.org/10.5205/1981-8963.2021.244597>

## INTRODUCTION

It is evident that population aging is a fact in the current reality and brings the need for a re-formulation in the health care model to meet the demands of this age group. Thus, Home Care (HC) emerges as a type of substitutive or complementary care to other modalities, which ensures the continuity of care through actions of health promotion, prevention, treatment and rehabilitation, through home visits and consultations with the professional team members.<sup>1</sup>

It is explained that home care services emerged from the difficulties observed by patients in accessing other health services. Faced with these difficulties, some common clinical situations in the daily life of HC are highlighted, among them, the risk of developing Pressure Ulcers (PU).<sup>2</sup>

PU are identified in the skin and/or underlying tissue, arising on bony prominences and/or sites with decreased subcutaneous adiposity, resulting from extrinsic pressure. It is discussed that advancing age is a factor influencing the development of these lesions, as changes in both skin texture and properties are seen with aging. It is evident that these ulcers usually occur in frail elderly people with impaired mobility, making a multi-professional action indispensable.<sup>3</sup> It is noteworthy that the onset of PU negatively impacts the functionality of these elderly and their social life.<sup>4</sup>

It is discussed that the scales that assess the risk of developing PU are important to identify and direct the necessary care. The Braden Scale was developed in 1987 and translated and validated into Portuguese in 1999, being a widely used instrument in the country, assessing the following aspects: sensory perception; humidity; activity; mobility; nutrition and friction and shear.<sup>5</sup>

It is noteworthy that there are few studies addressing the issue of PU in patients cared for at home,<sup>6</sup> denoting the need for further research on this subject, in order to provide subsidies for proposals of effective interventions to combat the development of these ulcers by suggesting prevention strategies. It is noteworthy that studies that address the risk of developing PU in the elderly accompanied at home are important for the improvement of nursing care and the multiprofessional team in the HC.

## OBJECTIVE

To analyze the factors associated with the risk of developing PUs according to the Braden Scale in the elderly assisted by the Home Care Service (HCS).

## METHOD

This is a quantitative, descriptive, cross-sectional study conducted in the municipality of Recife (PE), in the HCS of the Professor Fernando Figueira Institute of Integral Medicine (IMIP), from April 2017 to May 2018.

The study population was composed of people over 60 years old accompanied by the HCS at IMIP and with a convenience sample after meeting the inclusion and exclusion criteria. Included were people over 60 years of age assisted by the HCS at IMIP. Elderly people with severe cognitive impairment without the presence of a caregiver able to provide the questionnaire information at the time of the interview were excluded.

Data was collected through home interviews, using a semi-structured questionnaire with questions about the sociodemographic and clinical characteristics of the elderly, in addition to the application of the Braden Scale to assess the risk of developing LPP in the elderly in the sample. The questionnaire was applied by the researcher and five other HCS nurses previously oriented and trained for the application of the questionnaires.

The data was validated by double entry in Microsoft Excel spreadsheets, exporting them to the Statistical Package for Social Sciences (SPSS), version 20.0. The analysis was performed by generating statistical reports and the Fisher's Exact Test and the Likelihood Ratio were used with a significance level of 5%. A p value of  $<0.05$  was considered.

It is noteworthy that this study was approved by the Research Ethics Committee (REC) of IMIP under CAAE number 71609117.4.0000.5201 in compliance with Resolution No. 466/2012 of the National Health Council (NHC), which deals with the guidelines and regulatory standards for research involving human beings. It is noteworthy that all those involved in the research (elderly and/or caregivers) signed the Free and Informed Consent Term (FICT) to confirm their participation in the study.

## RESULTS

The sample was composed of 97 elderly individuals aged 60 to 99 years, with a mean of 76.71 years. Table 1 presents the results related to the participants' sociodemographic characteristics.

**Table 1. Sociodemographic characteristics of the sample (n=97). Recife (PE), Brazil. 2018.**

| Variables                    | n  | %    |
|------------------------------|----|------|
| <b>Sex</b>                   |    |      |
| Male                         | 39 | 40.2 |
| Female                       | 58 | 59.8 |
| <b>Age group (years)</b>     |    |      |
| 60 to 69                     | 27 | 27.8 |
| 70 to 79                     | 33 | 34.0 |
| 80 to 89                     | 37 | 38.1 |
| <b>Marital status</b>        |    |      |
| Single                       | 28 | 28.9 |
| Married                      | 31 | 32.0 |
| Divorced                     | 04 | 4.0  |
| Widow/er                     | 34 | 35.1 |
| <b>Education</b>             |    |      |
| Without education            | 21 | 21.6 |
| Incomplete elementary school | 55 | 56.7 |
| Elementary                   | 08 | 8.2  |
| Highschool                   | 09 | 9.3  |
| Higher education             | 04 | 4.1  |
| <b>Occupation</b>            |    |      |
| Retired                      | 51 | 52.6 |
| Continuous Service Benefit   | 41 | 42.3 |
| Without income               | 5  | 5.2  |
| <b>Family income</b>         |    |      |
| Up to 1 minimum wage         | 9  | 9.3  |
| From 2 to 3 minimum wages    | 86 | 88.6 |
| More than 3 minimum wages    | 2  | 2.1  |

It was evidenced that the most prevalent clinical diagnosis was stroke, with 35.1%, followed by dementia (30.9%), vascular ulcer (23.7%) and cancer (14.4%). It was noticed, regarding the risk classification of the sample, a prevalence of very high risk, with 39.2%, high (22.7%), moderate (12.4%), mild (16.5%), and no risk, with 9.3%. It was found that more than half of the elderly people studied were bedridden (54.6%). The presence of immobility syndrome was identified in 20.6% and

the presence of PUs in 22.7% of the sample, 18.6% with lesions in the sacral region and 6.2% in the trochanteric region.

Table 2 shows that the percentage of elderly individuals with very high risk was higher among those who had incomplete elementary education (52.7%). Regarding family income, we can see that of the nine elderly who had an income of up to one minimum wage, four were classified by the Braden Scale as very high risk (44.4%), three as mild risk (33.3%) and the other two as no risk (22.2%), while the two elderly who reported an income of more than three minimum wages were both classified as mild risk.

Table 2. Braden Scale evaluation according to sociodemographic variables, Recife (PE), Brazil. 2018.

| Variables                             | Without Risk | Light    | Moderate | High     | V e r y High | P value                   |
|---------------------------------------|--------------|----------|----------|----------|--------------|---------------------------|
|                                       | n(%)         | n(%)     | n(%)     | n(%)     | n(%)         |                           |
| Sex                                   |              |          |          |          |              |                           |
| Male                                  | 2 (5.3)      | 5(13.2)  | 3(7.9)   | 11(28.9) | 17(44.7)     | p <sup>(1)</sup> =0.432   |
| Female                                | 7(11.9)      | 11(18.6) | 9(15.3)  | 11(18.6) | 21(35.6)     |                           |
| Age group                             |              |          |          |          |              |                           |
| 60 to 69                              | 1(3.7)       | 2(7.4)   | 4(14.8)  | 5(18.5)  | 15(55.6)     | p <sup>(1)</sup> = 0.315  |
| 70 to 79                              | 3(9.1)       | 4(12.1)  | 4(12.1)  | 9(27.3)  | 13(39.4)     |                           |
| 80 to 89                              | 5(13.5)      | 10(27.0) | 4(10.8)  | 8(21.6)  | 10(27.0)     |                           |
| Marital status                        |              |          |          |          |              |                           |
| Single                                | 2(7.1)       | 6(21.4)  | 3(10.7)  | 4(14.3)  | 13(46.4)     | p <sup>(1)</sup> = 0.648  |
| Married                               | 3(9.7)       | 3(9.7)   | 3(9.7)   | 9(29.0)  | 13(41.9)     |                           |
| Divorced                              | 0(0.0)       | 2(50.0)  | 1(25.0)  | 1(25.0)  | 0(0.0)       |                           |
| Widow/er                              | 4(11.8)      | 5(14.7)  | 5(14.7)  | 8(23.5)  | 12(35.3)     |                           |
| Education                             |              |          |          |          |              |                           |
| Without education                     | 1(4.8)       | 2(9.5)   | 4(19.0)  | 7(33.3)  | 7(33.3)      | p <sup>(2)</sup> = 0.001* |
| I n c o m p l e t e elementary school | 3(5.5)       | 12(21.8) | 6(10.9)  | 5(9.1)   | 29(52.7)     |                           |
| Elementary                            | 2(25.0)      | 1(12.5)  | -        | 4(50.0)  | 1(12.5)      |                           |
| Highschool                            | 3(33.3)      | 1(11.1)  | 2(22.2)  | 2(22.2)  | 1(11.1)      |                           |

|                                   |         |          |           |          |          |                           |
|-----------------------------------|---------|----------|-----------|----------|----------|---------------------------|
| <b>Ocupação</b>                   |         |          |           |          |          |                           |
| <b>Occupation</b>                 | 5(9.8)  | 9(17.6)  | 6(11.8)   | 16(31.4) | 15(29.4) |                           |
| Retired                           |         |          |           |          |          |                           |
| C o n t i n u o u s               | 4(9.8)  | 7(17.1)  | 6(14.6)   | 5(12.2)  | 19(46.3) | p <sup>(1)</sup> = 0.336  |
| Service Benefit                   | -       | -        | -         | 1(20.0)  | 4(80.0)  |                           |
| Without income                    |         |          |           |          |          |                           |
| <b>Family income</b>              |         |          |           |          |          |                           |
| Up to 1 minimum wage              | 2(22.2) | 3(33.3)  | -         | -        | 4 (44.4) |                           |
| From 2 to 3 minimum wages         | 7(8.1)  | 11(12.8) | 12 (14.0) | 22(25.6) | 34(39.5) | p <sup>(1)</sup> = 0.024* |
| M o r e   t h a n 3 minimum wages | -       | 2(100.0) | -         | -        | -        |                           |

Legend: (1)Fisher's Exact Test; (2)Likelihood Ratio; (\*)Significant association of 5.0%.

Table 3 evaluates the significant association between Braden Scale classification and the following variables: vascular ulcer; stroke; cancer; dementia; bedridden elderly; immobility syndrome; sacral PU and trochanteric PU. It is observed that the Braden Scale risk classification was statistically significant in those elderly who were bedridden (p<0.001), had immobility syndrome (p<0.001), were diagnosed with vascular ulcers (p<0.001), stroke (p=0.009) and dementia (p<0.001).

**Table 3. Braden Scale evaluation according to clinical variables. Recife (PE) Brazil. 2018.**

| Variables             | Without risk | Light    | Moderate | High     | V e r y high | P value                   |
|-----------------------|--------------|----------|----------|----------|--------------|---------------------------|
|                       | n(%)         | n(%)     | n(%)     | n(%)     | n(%)         |                           |
| <b>Vascular Ulcer</b> |              |          |          |          |              |                           |
| Yes                   | -            | -        | -        | 1(4.3)   | 22(95.7)     | p <sup>(1)</sup> < 0.001* |
| No                    | 9(12.2)      | 16(21.6) | 12(16.2) | 21(28.4) | 16(21.6)     |                           |
| <b>Stroke</b>         |              |          |          |          |              |                           |
| Yes                   | 4 (11.8)     | 7 (20.6) | 8 (23.5) | 9 (26.5) | 6 (17.6)     | p <sup>(1)</sup> = 0.009* |
| No                    | 5 (7.9)      | 9 (14.3) | 4 (6.3)  | 13(20.6) | 32(50.8)     |                           |

|                             |          |          |           |          |          |                           |
|-----------------------------|----------|----------|-----------|----------|----------|---------------------------|
| Cancer                      |          |          |           |          |          |                           |
| Yes                         | 2 (14.3) | 1 (7.1)  | 1 (7.1)   | 3 (21.4) | 7 (50.0) | p <sup>(1)</sup> = 0.744  |
| No                          | 7 (8.4)  | 15(18.1) | 11 (13.3) | 19(22.9) | 31(37.3) |                           |
| Dementia                    |          |          |           |          |          |                           |
| Yes                         | 5 (16.7) | 9 (30.0) | 5 (16.7)  | 10(33.3) | 1 (3.3)  | p <sup>(1)</sup> < 0.001* |
| No                          | 4 (6.0)  | 7 (10.4) | 7 (10.4)  | 12(17.9) | 37(55.2) |                           |
| Bed ridden                  |          |          |           |          |          |                           |
| Yes                         | 9 (17.0) | 16(30.2) | 11 (20.8) | 14(26.4) | 3 (5.7)  | p <sup>(1)</sup> < 0.001* |
| No                          | -        | -        | 1 (2.3)   | 8 (18.2) | 35(79.5) |                           |
| Immobility Syndrome         |          |          |           |          |          |                           |
| Yes                         | 6 (30.0) | 9 (45.0) | 5 (25.0)  | -        | -        | p <sup>(1)</sup> = 0.005* |
| No                          | 3 (3.9)  | 7 (9.1)  | 7 (9.1)   | 22(28.6) | 38(49.4) |                           |
| Sacral Pressure Ulcer       |          |          |           |          |          |                           |
| Yes                         | 3 (16.7) | 7 (38.9) | 1 (5.6)   | 5 (27.8) | 2 (11.1) | p <sup>(1)</sup> = 0.018* |
| No                          | 6 (7.6)  | 9 (11.4) | 11 (13.9) | 17(21.5) | 36(45.6) |                           |
| Trochanteric Pressure Ulcer |          |          |           |          |          |                           |
| Yes                         | 2 (33.3) | 3 (50.0) | -         | -        | 1 (16.7) | p <sup>(1)</sup> = 0.018* |
| No                          | 7 (7.7)  | 13(14.3) | 12 (13.2) | 22(24.1) | 37(40.7) |                           |

Legend: (1)Fisher's Exact Test; (\*)Significant association of 5.0%.

### DISCUSSION

It is evident the predominance of the female gender in this study. This result has been found in studies that evaluated home care patients,<sup>4,6,7-8</sup> which emphasizes the occurrence in Brazil, as in the world, of the phenomenon of the feminization of aging, related to a higher male mortality, reducing the proportion of elderly men.<sup>9-10</sup>

One notices that the average age of the participants in this study, 76.7 years, is lower than in other studies that observe a predominance of elderly people over 80 years.<sup>5,8,11</sup> Note, in the categorization of age groups, the highest prevalence among those over 80 years old, and 72% of the sample was over 70 years old. It is believed that this reduction in the average age was due to the high prevalence of young elderly people between 60 and 69 years old, who comprised about one third of the sample.

It is found, in the marital status variable, consonance with a research developed in 2016 with elderly people in primary care,<sup>8</sup> however, differing from the findings of a study conducted in 2014<sup>12</sup> with hospitalized elderly, which found a higher prevalence of married people. This divergence is possibly explained by the difference in study designs and sample characteristics. It was observed in this study that 32.0% were married and 68.0% had no spouses because they were single, widowed or divorced, alerting the transference of the responsibility of care to the children, mainly, which generates economic and social repercussions by impacting the exit of these young caregivers from the labor market and the new role of caregiver of their parents.

The data in relation to education converge with studies that showed a higher predominance of seniors with incomplete primary education or low education.<sup>6,8,11-12</sup> A significant association was found between elderly people who had incomplete elementary school education and very high risk of developing PU. In addition, a high prevalence of illiterate people (21.6%) is listed, which, if added to those with incomplete primary education (56.7%), makes up 78.3% of the sample with low education, reflecting how this generation of elderly Brazilians did not have the opportunity to study and, thus, coexist, in the present, with aging without adequate remuneration for their livelihood.

The data found regarding family income differ from other studies that demonstrated a higher prevalence of income between one and two minimum wages.<sup>6,8,12</sup> It is inferred that the approach to the income question has been inadequate, since, when addressing the family income, one evaluates not only the income of the elderly, but also of the household. It was found that 42.0% of the sample receives the Continuous Service Benefit (BPC), reflecting the need for government assistance, 52.0% are retired and 4.0% have no income, which shows that the income of the elderly alone is in line with that verified in other studies.<sup>6,11-12</sup> This explains why, when evaluating the income per household and the costs with the elderly dependent, the range between two and three minimum wages still seems insufficient to provide for the general needs of a family.

Similar results were found regarding the most prevalent diagnoses when compared to other Brazilian studies conducted at home, which showed, among them, stroke and dementia.<sup>5,6-8,11</sup>

It is worth mentioning that the diagnosis of stroke was statistically significant for the risk of PU ( $p=0.009$ ), and the association between this and the Braden Scale shows progressive percentages of no risk (11.8%) for mild (20.6%), moderate (23.5%) and high (26.5%) risk, which is in accordance with researches that have related the presence of stroke as a predisposition to the emergence of these lesions. It was observed, however, in this study, a reduction in the percentage of high risk compared to very high risk (17.6%).<sup>5,8,11</sup> It is inferred that this occurs due to the numerous clinical syndromes and motor sequelae associated with non-motor sequelae caused by vascular impairment in various brain regions and of different amplitudes, causing a wide clinical variety among patients

and different degrees of dependence, which are framed in the same stroke diagnosis, and may then present different risks for the development of PU.

There was also a statistical association between those diagnosed with dementia and the risk of developing lesions ( $p < 0.001$ ), but these presented proportionally the lowest percentage of very high risk. Therefore, it is important to highlight that, despite not having the risk classified as very high; most of the elderly were at risk of developing the ulcer. It is known that dementia is a progressive neurodegenerative disease, which presents different stages of evolution and, therefore, affects functionality and mobility in different ways, generating lower or higher risks of developing PU depending on the time of diagnosis of the disease.

It is identified that the data regarding the risk of developing PU alert to the impact of vascular ulcers on the functional capacity and mobility of the elderly, greatly interfering with health care.<sup>13</sup> The significant presence of the diagnosis of vascular ulcer was associated with the risk of developing PU ( $p < 0.001$ ), and this is a phenomenon little discussed in the literature and there is a need for further studies on the subject. It is believed that the presence of vascular ulcers results in mobility restriction, allowing the elderly to remain in a state of longer rest, increasing the risk of developing PU.

It is discussed that in addition to immobility itself due to bed rest, the bedridden elderly may develop complications such as thrombosis and weight loss,<sup>3</sup> increasing the risk of developing ulcers. It is mentioned that a serious complication is the emergence of the Immobility Syndrome, which encompasses, within its diagnostic criteria, cutaneous distress or PU itself. It is known that Immobility Syndrome is defined by major criteria (cognitive deficit and multiple contractures) and minor criteria (dysphagia, aphasia, double incontinence, and cutaneous distress or ulcer), requiring the mandatory presence of two major criteria associated with two minor criteria, and therefore the patient may or may not have a diagnosis of PU.<sup>3</sup>

In this study, 54.6% of the elderly were bedridden, and 20.6% had immobility syndrome, and both were statistically associated with the risk of developing PU ( $p < 0.001$ ). It is noteworthy that both conditions are known risk factors for the development of these ulcers by prolonged immobilization.<sup>5,8,14</sup> The Braden Scale scores for the elderly with Immobility Syndrome are justified for two reasons: first, the different minor criteria associated with the diagnosis; second, the peculiarities in the care received by the elderly with Immobility Syndrome, which directly influence the risk of developing PU.

Of the 97 elderly assessed, 22 were diagnosed with PU, corresponding to a prevalence of 22.7%. It is necessary to emphasize a particularity of this health service modality, since HC is a medium-complexity service, and these lesions are often the reason for the elderly to be admitted

to the program due to the need for different dressing coverage, analgesia, and multidisciplinary guidance for the treatment of these lesions.

Another data found is discussed: 18.2% of the elderly with PU were not at risk of developing lesions. This finding can be explained by extrinsic conditions such as: the development of the ulcer during hospitalization (difficulty in walking, mattresses covered with impermeable materials that increase sweating and humidity, for example); the family's lack of knowledge regarding the periodic change of decubitus or frequent diaper changes, or by intrinsic characteristics of the Braden Scale itself, which assesses different domains.<sup>6</sup>

It is noteworthy that the most prevalent location of the PU was the sacral (81.8%), trochanteric (27.3%), and ischial (18.1%) regions, mentioning that they may be associated with each other, corroborating the results found in other studies.<sup>6-7</sup> It is discussed that a higher prevalence of PU in the sacral region is related to prolonged immobilization time in bed, which suggests a higher risk of developing them due to a longer stay in the dorsal decubitus position.<sup>15-16</sup> It is discussed that, of the 18 elderly with lesions in the sacral region, three were not at risk of developing other lesions, which denotes the importance of assessing the risk, by applying a scale, even in those elderly who already have a lesion. It was observed that the presence of PU showed a significant association for the risk of developing other lesions ( $p < 0.001$ ) and, when categorized by region, both sacral and trochanteric maintained the association with  $p = 0.005$  and  $p = 0.018$ , respectively.

The limitations of the study are associated with the methodological design of the study, as it does not allow the evaluation of the elderly in the HCS with a longer time frame, besides the fact that it was conducted in only one home care service, not representing the full magnitude of the problem studied. It is necessary that further research with other methodological designs be developed in order to have a deeper understanding of the issues related to the risk of developing PU in the elderly accompanied at home.

## CONCLUSION

The association of sociodemographic and clinical characteristics of the elderly assisted in a HCS in Pernambuco with the risk of developing PU was evidenced, evaluating them by the Braden Scale. It was found that low education, vascular ulcer, bedridden elderly, patients with immobility syndrome, stroke and dementia were significantly associated with the risk of developing PU.

It is noteworthy that studies that assess the risk of developing PU in the elderly population at home are of great contribution and relevance, since this population is growing rapidly and home care is configured as an essential substitute and/or complementary component to the hospital-centric model.

## CONTRIBUTIONS

We inform that all authors contributed equally in the design of the research project, data collection, analysis and discussion, as well as in the writing and critical review of the content with intellectual contribution and in the approval of the final version of the study.

## CONFLICT OF INTERESTS

Nothing to declare.

## REFERENCES

1. Ministério da Saúde (BR). Conselho Nacional de Saúde. Portaria nº 825, de 25 de abril de 2016. Redefine a Atenção Domiciliar no âmbito do Sistema Único de Saúde (SUS) [Internet]. Ministério da Saúde; 2016 [cited 2019 Feb 10]; Available from: [http://bvsms.saude.gov.br/bvs/saudelegis/gm/2016/prt0825\\_25\\_04\\_2016.html](http://bvsms.saude.gov.br/bvs/saudelegis/gm/2016/prt0825_25_04_2016.html)
2. Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Caderno de atenção domiciliar [Internet]. 2013 [cited 2019 Feb 10];2(1):1-205. Available from: [http://189.28.128.100/dab/docs/publicacoes/geral/cad\\_vol1.pdf](http://189.28.128.100/dab/docs/publicacoes/geral/cad_vol1.pdf)
3. Freitas EV, Py L. Tratado de geriatria e gerontologia. 4. ed. Rio de Janeiro: Guanabara Koogan, 2016 [cited 2019 Feb 12].
4. Vieira VAS, Santos MDC, Almeida AN, Souza CC, Bernardes MFVG, Mata LRF. Risco de Lesão Por Pressão em idosos com comprometimento na realização de atividades diárias. Rev de Enfermagem do Centro-Oeste Mineiro 2018 [cited 2019 Feb 14]; 8:e2599. DOI: 10.19175/recom.v7i0.2599
5. Santos RR, Zagonel IPS, Sanches LC, Ribeiro ER, Garbeline MCL. Educação em saúde: conhecimento dos enfermeiros para prevenção da lesão por pressão no domicílio. Rev Espaço para a Saúde. 2018 [cited 2019 Mar 10]; 19(2):54-63. DOI: 10.22421/15177130-2018v19n2p54
6. Moro JV, Caliri MHL. Pressure ulcer after hospital discharge and home care. Escola Anna Nery [Internet]. 2016 [cited 2019 Feb 11]; 20(3):e20160058. DOI: 10.5935/1414-8145.20160058
7. Vieira CPB, Araújo TME. Prevalence and factors associated with chronic wounds in older adults in primary care. Rev Esc Enferm USP. 2018 [cited 2019 Mar 12]; 52:e03415. DOI: 10.1590/S1980-220X2017051303415

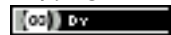
8. Vieira CPB, Oliveira EWF, Ribeiro MGC, Luz MHBA, Araújo OD, Pereira AFM. Preventive actions in pressure ulcers carried out by nurses in primary care. J Res Fundam Care Online [Internet]. 2016 [cited 2019 Feb 11]; 8(2):4447-59. DOI: 10.9789/2175-5361.2016.v8i2.4447-4459
9. Ministério do Planejamento, Orçamento e Gestão (BR), Instituto Brasileiro de Geografia e Estatística. Síntese de indicadores sociais: uma análise das condições de vida da população brasileira: 2018 [Internet]. Rio de Janeiro: IBGE; 2018 [cited 2019 Jan 10]; Available from: <https://biblioteca.ibge.gov.br/visualizacao/livros/liv101629.pdf>
10. Rajasi RS, Mathew T, Nujum TZ, Anish TS, Ramachandran R, Lawrence T. Quality of Life and Sociodemographic Factors Associated with Poor Quality of Life in Elderly Women in Thiruvananthapuram, Kerala. Indian Journal of Public Health [Internet]. 2016 [cited 2019 Jan 19]; 60(3). DOI: 10.4103/0019-557X.189016.
11. Ayala ALM, Galende ACBPS, Stoeberl FR. Cuidados de enfermagem na prevenção de úlcera por pressão em pacientes acamados no domicílio. Semina Cienc Biol Saúde [Internet]. 2016 [cited 2019 Apr 14]; 37(2):25-38. DOI: 10.5433/1679-0367.2016v37n2p25
12. Vieira VAS, Santos MDC, Almeida AN, Souza CC, Bernardes MFVGB, Mata LRF. Risco de lesão por pressão em idosos com comprometimento na realização de atividades diárias. Revista de Enfermagem do Centro-Oeste Mineiro. 2018 [cited 2020 jun 28]; 8:e2599. DOI: 10.19175/recom.v7i0.2599
13. Joaquim FL, Camacho ACLF, Sabóia VM, Santos RC, Santos LSF, Nogueira GA. Impact of home visits on the functional capacity of patients with venous ulcers. Rev Bras Enferm [Internet]. 2016 [cited 2019 Feb 16]; 69(3):468-77. DOI: 10.1590/0034-7167.2016690308i
14. Debon R, Fortes VLF, Rós ACR, Scaratti M. The Nurses' Viewpoint Regarding the Use of the braden Scale With the Elderly Patient. J Res Fundam Care Online [Internet]. 2018 [cited 2019 Jan 11]; 10(3): 817-823. DOI: 10.9789/2175-5361.2018.v10i3.817-823
15. Pedrosa IL, Silva MSML, Araújo AA, Schwanke CHA, Carli GA, Gomes I. Pressure ulcers in elders and in non-elders: a historical cohort study. Online Braz J Nurs [Internet]. 2014 [cited 2019 Feb 11]; 13(1):82-91. DOI: 10.5935/1676-4285.20144111
16. Oomens CWJ, Broek M, Hemmes B, Bader DL. How does lateral tilting affect the internal strains in the sacral region of bed ridden patients? A contribution to pressure ulcer prevention. Clin Biomech [Internet]. 2016 [cited 2019 Jan 10]; 35:7-13. DOI: 10.1016/j.clinbiomech.2016.03.009

## Correspondence

Isabel Cristina Sibalde Vanderley  
Email: belvanderley@hotmail.com

Submission: 03/21/2020  
Accepted: 06/19/2021

Copyright© 2021 Journal of Nursing UFPE on line.



This is an open access article distributed under the Attribution CC BY 4.0 [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by/4.0/), which allows others to distribute, remix, adapt and create from your work, even for commercial purposes, as long as they credit you for the original creation. It is recommended to maximize the dissemination and use of licensed materials.