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Original article

Ability to care for urban and rural informal caregivers of cancer patients*

Habilidade de cuidado de cuidadores informais urbanos e rurais de pacientes em tratamento oncológico

Capacidad de atención de cuidadores informales urbanos y rurales de pacientes en tratamiento oncológico

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Abstract

Objective: To correlate the differences in the care ability of informal urban and rural family caregivers of cancer patients associated with sociodemographic characteristics. **Method:** Cross-sectional study. Participants were 222 informal family caregivers (n = 163 urban; n = 59 rural) of cancer patients from the chemotherapy and radiotherapy sectors of a university hospital, from 2017 to May 2018. A sociodemographic and care characterization form and the Caring Ability Inventory were used. For analysis, the tests Lilliefors, T de Student, Mann-Whitney, Kruskal Wallis and ANOVA were used. **Results:** Informal urban family caregivers showed higher averages in total care ability, knowledge, courage and patience. Statistically significant differences in total care ability and its dimensions were identified in all variables of sociodemographic characterization. **Conclusion:** There is a significant correlation between the ability to care and its dimensions knowledge, courage and patience associated with sociodemographic characteristics.

Descriptors: Caregivers; Neoplasms; Rural Population; Urban Population; Nursing

Resumo

Objetivo: Correlacionar as diferenças na habilidade de cuidado de cuidadores familiares informais urbanos e rurais de pacientes em tratamento oncológico associadas às características sociodemográficas. **Método:** Estudo transversal. Participaram 222 cuidadores familiares informais (n =163 urbanos; n = 59 rurais) de pacientes com câncer dos setores de quimioterapia e radioterapia de um hospital universitário, no período de 2017 a maio de 2018. Utilizaram-se um formulário de caracterização sociodemográfica e de cuidados prestados e o Caring Ability Inventory. Para análise empregaram-se os testes Lilliefors, T de Student, Mann-Whitney, Kruskal

Wallis e ANOVA. **Resultados:** Os cuidadores familiares informais urbanos apresentaram maiores médias na habilidade de cuidado total, no conhecimento, coragem e paciência. Foram identificadas diferenças estatisticamente significativas na habilidade de cuidado total e suas dimensões em todas as variáveis da caracterização sociodemográfica. **Conclusão:** Existe correlação significativa na comparação da habilidade de cuidado e suas dimensões conhecimento, coragem e paciência associada às características sociodemográficas.
Descritores: Cuidadores; Neoplasias; População Rural; População Urbana; Enfermagem

Resumen

Objetivo: Correlacionar las diferencias en la capacidad de cuidado de cuidadores familiares informales urbanos y rurales de pacientes en tratamiento oncológico asociadas a las características sociodemográficas. **Método:** Estudio transversal. Participaron 222 cuidadores familiares informales (n = 163 urbanos; n = 59 rurales) de pacientes con cáncer de los sectores de quimioterapia y radioterapia de un hospital universitario, en el período de 2017 a mayo de 2018. Se utilizó un formulario de caracterización sociodemográfica y de cuidados prestados y el Caring Ability Inventory. Para el análisis se utilizaron las pruebas Lilliefors, T de Student, Mann-Whitney, Kruskal Wallis y ANOVA. **Resultados:** Los cuidadores familiares informales urbanos presentaron mayores promedios en la capacidad de cuidado total, en el conocimiento, valor y paciencia. Se identificaron diferencias estadísticamente significativas en la capacidad de cuidado total y sus dimensiones en todas las variables de la caracterización sociodemográfica. **Conclusión:** Existe una correlación significativa en la comparación de la capacidad de cuidado y sus dimensiones conocimiento, coraje y paciencia asociada a las características sociodemográficas.
Descriptores: Cuidadores; Neoplasias; Población Rural; Población Urbana; Enfermería

Introduction

As the population ages, the number of people living with one or more chronic health conditions continues to increase in the Brazilian and international scenarios. Among them, there are the chronic non-communicable diseases (CNCDs), recognized as a contemporary challenge, which represents the majority of causes of morbidity and mortality in the world.[1] In this context, cancer is identified as the second cause of death associated with due to its epidemiological, social and economic magnitude, it constitutes a complex public health problem.[2] In addition, it is a condition that affects the health and quality of life of may compromise the independence to carry out activities of daily life.[3]

From this perspective, much of the care provided to individuals during cancer treatment is carried out at home. In this sense, the demands of care are usually met by one of the family members or significant person, called caregiver, which can be classified into formal and informal. The focus of this study is on the informal caregiver, which comprises a family member, friend, community person or neighbor who has the task of performing the tasks, without employment or remuneration, and who assumes the responsibility of caring.[4] This type of long-term care, at home and full-time, is increasingly frequent in contexts involving cancer disease.[5]

However, as the commitment to care is a physically and emotionally strenuous task, the caregiver seeks ways to adjust and adapt to changes, reducing his leisure time and socializing with family and friends, often needing to review their life at work and on a daily basis, requiring support, resources and recognition.[6] Considering this situation, the ability to care is understood as the potential that the person has, in relation to assuming the role of caregiver of another person who is in a situation of chronic incapacitating disease. This ability covers cognitive, instrumental and attitudinal dimensions, which can be identified and measured according to indicators of self-knowledge and the other, and technical skills, as well as courage the development and patience, which allow finding meaning in the assigned role of caregiver.[7]

The literature points to possible differences related to dealing with the caregiver and living and suffering from a chronic disease, in urban and rural contexts.[8-9] These differences may be in perceptions about care, access to information and services, quality of health and well-being mental state.[10-12] Studies that propose to examine the care skills of caregivers need to go beyond definitions, and are important contributions to the development of interventions that focus on health and the preparation of informal caregivers.[13]

Also, informal family caregivers often need psychological support due to the overload and stress of caring, and clear information about the disease, treatment and care. In the rural context, access to services is limited and there is a lack of practical support for managing the patient's daily life activities.[11-12] The experience and outcomes of cancer illness may vary between urban and rural settings. In the urban, people have easier access to specialized health services, treatment centers, advanced technologies. This can lead to early diagnosis and more effective treatment and care options. In rural areas, cultural perceptions and stigmas around cancer may hinder the search for help and emotional processing of the experience.[8-10]

Moreover, comparative studies on informal urban and rural caregivers are incipient and are concentrated in the international context,[8-12] indicating a gap in Brazilian knowledge and the need to develop research directed to deepen knowledge on this subject, so that professionals, especially nurses, move actions of support and information that favor the development or improvement of the ability to care. In this context, it should be noted that the task of caring, without knowledge and mastery of skills to perform it, can cause negative consequences such as overload and stress.

From this observation, we ask: What is the association of the ability to care of informal urban and rural family caregivers with sociodemographic variables? In this sense, the objective of the study was to correlate the differences in the care ability of informal urban and rural family caregivers of cancer patients associated with sociodemographic characteristics.

Method

Cross-sectional study, in which the recommendations of the Strengthening the Reporting of Observational studies in Epidemiology statement (STROBE) were used to guide the writing of this document.

The reference population was constituted by informal urban and rural family caregivers of patients aged over 18 years, in oncology treatment, Selected in the chemotherapy and radiotherapy sectors of a university hospital located in the central region of the state of Rio Grande do Sul, Brazil, from May 2017 to May 2018.

The selection of participants was based on the recognition of patients registered in the oncology service that presented some degree of dependence for the execution of basic activities of daily living at home, evaluated by the Barthel index (BI). This instrument, validated for Brazil, can be applied to any person who presents some kind of functional disability and mobility in different age groups, and addresses ten activities: food; bathroom use; personal hygiene; bathing; clothing; sphincter control (vesical and intestinal); walking or wheelchair; transfer from the chair to bed; and up and down stairs.[14-15]

It should be noted that the place of residence – urban or rural – was obtained from the information regarding the address registered in the patient's medical record, being subsequently confirmed with patients and/or informal family caregivers. As residents in the rural context were considered those who confirmed to reside in an area outside cities, district headquarters or villages.

The selection criteria for the study sample defined were: to be the main informal caregiver responsible for home care, most of the time, regardless of the time they were caring, be 18 years of age or more and not receive remuneration for the provision of care. When there was more than one caregiver responsible for care, the patient was asked to indicate the caregiver who provided most of the care.

The sampling used was non-probabilistic for convenience, carried out in two phases. In the first, all dependent patients who were in oncology services during the data collection period were identified (n=264). In the second, we contacted the informal caregivers of the respective patients at the radiotherapy and chemotherapy outpatient clinic, of which 35 were not the main caregivers, two were under 18 years old and five did not accept to participate in the study. Thus, the sample consisted of 222 informal urban and rural family caregivers, representing 84.1% of the population of dependent patients undergoing cancer treatment during this research. In addition, according to the informal caregivers' place of residence, the sample was divided into two groups: urban scenario (n=163) and rural scenario (n=59). There was an unequal distribution among the groups, with the rural group being smaller (26.6% of the total sample). This difference may impact the statistical power of the analyses, which is why the relationships between variables were interpreted in a correlational way, considering the cross-sectional nature of the study.

Two instruments were used for data collection. The first was the questionnaire for sociodemographic characterization and with questions related to care provided, containing the following variables: sex, age, schooling, marital status, occupational situation, income, with whom he lives, time of care, period of care, assistance from a third party and previous experience of care. The second instrument applied was the Caring Ability Inventory (CAI), in the version translated into Portuguese.[16] It is noteworthy that the original name was kept, in English, for the inventory and the acronym CAI-BR for the Brazilian version, according to the position of the authors responsible for translation and transcultural adaptation of the instrument.[16]

The CAI-BR aims to evaluate the abilities of a subject from his own perception about his ability to provide care, paying attention to instrumental and cognitive aspects. This instrument was created in 1999[7], and translated and validated into Brazilian Portuguese in 2016.[16] The reliability and validity of the original CAI were evaluated by Cronbach's Alpha and test-retest, obtaining values of 0.84 and 0.80, respectively.[7] Cronbach's Alpha obtained a result of 0.78 and the Correlation Coefficient, a score of 0.76.[16] In this study, internal consistency was verified by Cronbach's Alpha and presented the following values for total care ability and its dimensions: CAI-BR total (0.68); Knowledge (0.63); Courage (0.67); and Patience (0.65).

The inventory consists of 37 items, with responses organized on a Likert scale ranging from 1 to 5, in which 1 is "strongly disagree" and 5, "strongly agree". The total score and each of the dimensions of the instrument is obtained by the sum of the answers given to the items that compose it. The CAI-BR is organized in three dimensions of care: knowledge (understanding oneself and others), courage (ability to face the unknown) and patience (tolerance and persistence), with 14, 13 and 10 items, respectively.

The information collected was stored and organized in a spreadsheet in the Excel for Windows program, inserted by double independent typing. After the verification and correction of inconsistencies, the base was analyzed with the help of the program Statistical Package for Social Science version 23.0. The data corresponding to the place of residence of informal caregivers were divided into two groups: urban caregivers and rural caregivers. The qualitative variables appear as absolute and relative frequencies, and the quantitative ones in measures of central tendency and standard deviation (SD). The normality of the groups was tested from the Lilliefors test. Student's t-test was used to compare the groups when both presented data with normal distribution, and the Mann-Whitney test when asymmetric. For the comparison of groups with three or more categories, we used the Kruskal Wallis test when they did not present a normal distribution, and the ANOVA test when the distribution was normal. For all analyses, a significance level of 5% was considered.

It should be noted that this study is part of a broader research that investigated different aspects of care provided by informal family caregivers of patients undergoing cancer treatment. This article focuses on the differences in care ability of urban and rural caregivers, analyzing their association with sociodemographic characteristics. Thus, the understanding of the factors that influence the ability to care is broadened and the relevance of subsidizing the planning of nursing interventions directed to this population is reinforced.

The ethical principles of Resolution n. 466/12, of the National Health Council, were respected. The ethical approval was granted by the Research Ethics Committee of the Federal University of Santa Maria on 22/03/2017, under the Opinion no 1.977.316 and Certificate of Presentation of Ethical Appreciation no 65195617.0.0000.5346. All participants signed the Informed Consent Form.

Results

The study sample consisted of 222 informal urban and rural family caregivers of patients undergoing cancer treatment. Table 1 shows the results of the characterization of caregivers, showing similarities and differences between the scenarios. Among the similarities, it was identified predominance: female (urban: n=133, 81.6%; rural: n=43, 72.8%); people aged 48 to 76 years (urban: n=96, 58.9%; rural: n=38, 64.4%); with partner (urban: n=124, 76%; rural: n=48, 81.4%); who do not engage in paid work (urban: n=108, 66.3%; rural: n=37, 62.7%); with family income of up to three minimum wages (urban: n=105, 64.4%; rural: n= 48, 81.3%); living with the (a) patient and other relatives (urban: n=81, 49.7%; rural: n=24, 40.7%); and with the help of third parties to carry out care in daily life activities (urban: n=114, 69.9%; rural: n=42, 71.2%). It is noteworthy that, for the calculation of family income, we considered the minimum wage in force in 2018, which was 954.00 BRL.

The differences between informal caregivers were observed in the following variables: schooling (urban: 7 to 13 years of study, n=84, 51.5%; rural: 0 to 6 years of study, n=33, 55.9%), care time (urban: 1 to 4 months, n=62, 38%; rural: more than 8 months, n=32, 54.2%) and previous experience (urban: with previous experience, n=94, 57.7%; rural: without previous experience, n=31.52.5%).

Table 1 – Characterization of informal urban and rural family caregivers of patients undergoing cancer treatment (n=222). Brazil, 2025

Caregiver Variables	**Categories**	**n(%)**	
		Urban	**Rural**
Sex	Male	30(18.4)	16(27.1)
	Female	133(81.6)	43(72.8)
Age	18 - 47 years	67(41.1)	21(35.5)
	48 - 76 years	96(58.9)	38(64.4)
Education	0 - 6 years	42(25.7)	33(55.9)
	7 - 13 years	84(51.5)	21(35.5)
	≥ 14 years	37(22.7)	5(8.4)
Marital Status	With partner	124(76)	48(81.4)
	Without partner	39(23.9)	11(18.6)
Occupational Status	Working	55(33.7)	22(37.3)
	Not working	108(66.3)	37(62.7)
Income (*MW)	Up to 3 MW	105(64.4)	48(81.3)
	4 - 6 MW	46(28.2)	11(18.6)
	> 6 MW	12(7.36)	-
Lives with	With the patient	36(22)	17(28.8)
	With the patient and other family members	81(49.7)	24(40.7)
	Does not live with the patient	46(28.2)	18(30.5)
Time caring	1 - 4 months	62(38)	16(27.1)
	5 - 8 months	41(25.1)	11(18.6)
	> 8 months	60(36.8)	32(54.2)
Help from third parties	Yes	114(69.9)	42(71.2)
	No	49(30)	17(28.8)
Previous experience	Yes	94(57.7)	28(47.4)
	No	69(42.3)	31(52.5)

*MW= Minimum wage in effect at the time of data collection: 954.00 BRL

Table 2 presents the results of mean, standard deviation and p-value for comparisons between urban and rural informal family caregivers with sociodemographic variables and care ability and their dimensions.

Table 2 – Correlation of total caregiving ability and its dimensions among informal urban and rural family caregivers of cancer patients with sociodemographic variables (n=222). Brazil, 2025

	TOTAL CAI- BR			**KNOWLEGDE**			**COURAGE**			**PATIENCE**		
	Mean (SD)		p-value	Mean (SD)		p-value	Mean (SD)		p-value	Mean (SD)		p-value
	U*	**R***		**U***	**R***		**U***	**R***		**U***	**R***	
Sex												
Male	139.2 (8.1)	134.2 (6.2)	0.121†	52 (4.4)	46.7 (3.2)	0.175†	46.3 (4.2)	44.1 (5)	0.717†	40.8 (2.7)	39.3 (1.9)	0.053†
Female	138.8 (7.8)	135.4 (7.5)	0.111†	52.6 (3.4)	48 (3.7)	**<0.001†**	46 (4.4)	43.7 (4.3)	**0.004†**	40.2 (2.8)	39.7 (2.5)	0.317†
Age (years)												
18 - 47	139.3 (8.0)	134.4 (6.7)	0.088‡	52 (4.1)	46.9 (3.3)	0.046‡	46.5 (4.5)	44.1 (4.4)	0.355‡	40.8 (2.6)	39.4 (1.8)	0.387‡
48 - 76	138.6 (7.7)	135.4 (7.4)	**0.003‡**	52.9 (3.7)	48.1 (3.7)	**<0.001‡**	45.7 (4.3)	43.7 (4.5)	**0.004‡**	40 (2.8)	39.6 (2.6)	0.111‡
Education (years of study)												
0 - 6	136.9 (5.9)	134.9 (6.9)	**0.047§**	52.4 (2.7)	48.1 (4.0)	**<0.001§**	45.7 (3.6)	43.5 (3.9)	0.092§	39.8 (2.5)	39.3 (2.5)	0.964§
7 - 13	139.3 (8.1)	134.6 (7.4)	0.058§	52.8 (3.8)	46.8 (2.2)	**<0.001§**	46 (4.5)	43.8 (5.6)	0.129§	40.5 (2.9)	39.8 (2.2)	0.160§
≥ 14	140.2 (8.9)	138.6 (7.8)	0.068§	52.1 (5.0)	48.4 (5.1)	**0.013§**	47.8 (4.3)	45.6 (2.6)	**0.018§**	40.3 (2.6)	40.4 (1.7)	0.096§
Marital Status (partner)												
With	138.7 (7.2)	135.8 (7.3)	**0.001†**	52.6 (3.3)	47.5 (3.5)	**<0.001†**	45.8 (4.3)	43.8 (4.7)	**0.001†**	40.2 (2.8)	39.4 (2.4)	**0.002†**
Without	139.5 (9.8)	135.3 (6.4)	0.365†	52.2 (5.4)	48.2 (4.0)	**0.023†**	46.8 (4.6)	43.8 (3.6)	0.088†	40.5 (2.8)	40.3 (1.9)	0.847†
Occupational Status (working)												
Yes	138.9 (7.8)	135.2 (6.0)	0.496†	51.9 (3.9)	46.8 (3.0)	**0.001†**	46.8 (4.6)	43.9 (4.7)	0.140†	40 (2.6)	39.5 (1.7)	0.805†
No	138.9 (7.9)	135.8 (7.6)	**0.001†**	52.8 (3.9)	48.2 (3.8)	**<0.001†**	45.7 (4.2)	44.4 (4.3)	**0.013†**	40.4 (2.9)	39.6 (2.7)	**0.037†**
Income (MW = Minimum Wage)												
Up to 3	137.9 (7.2)	135.1 (7.5)	**0.027§**	52.1 (3.6)	47.7 (3.6)	**<0.001§**	45.8 (4.5)	43.7 (4.8)	**0.020§**	40 (2.7)	39.6 (2.4)	0.355§
4 - 6	139.9 (8.5)	135 (4.8)	0.056§	52.8 (4.3)	47.4 (3.5)	**0.001§**	46.4 (4.1)	44.3 (2.4)	0.077§	40.7 (2.9)	39.4 (2.1)	0.142§
> 6	143.1 (9.3)	-	-	54.5 (4.9)	-	-	47.4 (4.1)	-	-	41.2 (3.0)	-	-
Lives with (cared person)												
With	138.9 (8.7)	134 (6.8)	0.063§	52.6 (4.1)	47 (3.2)	**<0.001§**	46.3 (4.5)	44.4 (4.5)	0.239§	40.1 (2.5)	39.8 (2.8)	0.076§
With and more	137.8 (7.2)	138 (7.1)	**0.032§**	52.4 (3.8)	49.3 (3.2)	**<0.001§**	45.5 (4.2)	44.6 (4.5)	0.385§	39.8 (2.8)	40.2 (2.4)	0.675§
Does not live with	140.8 (8.0)	131.9 (6)	0.763§	52.7 (3.9)	46.1 (3.5)	**<0.001§**	46.9 (4.5)	43.2 (4.1)	**<0.001§**	40.2 (2.8)	39.5 (1.5)	**0.019§**
Time caring (months)												

1 - 4	139.3 (7.5)	135.1 (5.4)	**0.026§**	52.8 (4)	47.7 (3.4)	**<0.001§**	46.1 (4.7)	44.2 (3.5)	0.146§	40.4 (2.6)	39.1 (1.2)	0.051§
5 - 8	139.6 (7.7)	138.8 (6.8)	0.911§	52.7 (3.7)	47.8 (3.1)	**<0.001§**	46.5 (4.2)	46.4 (2.8)	0.669§	40.3 (2.9)	40.5 (2.9)	0.718§
> 8	137.9 (8.3)	134.8 (7.7)	**0.024§**	52.1 (4.0)	47.6 (3.9)	**<0.001§**	45.7 (4.2)	43.8 (5.0)	**0.002§**	40.2 (2.8)	39.5 (2.6)	0.288§
Care period (shifts)												
Full-time	138.6 (7.6)	135.8 (7.1)	0.456§	52.8 (3.6)	48.2 (3.4)	**<0.001§**	45.6 (4.3)	44.4 (4.5)	**0.030§**	40.1 (2.7)	39.4 (2.6)	0.565§
2 shifts	139.7 (8.2)	134.8 (6.8)	0.328§	52.2 (4.6)	46.3 (3.8)	**0.003§**	46.9 (4.0)	43.6 (4.3)	0.087§	40.6 (2.8)	40 (1.6)	0.423§
1 shift	138.1 (8.4)	-	-	51.6 (2.6)	-	-	46.1 (5.6)	-	-	40.4 (3.4)	-	-
Help from third parties												
Yes	138.9 (7.6)	134.2 (6.5)	**0.001†**	52.5 (3.6)	47.7 (3.7)	**<0.001†**	46 (4.4)	43 (4.1)	**0.001†**	40.5 (2.9)	39.5 (2.3)	0.053†
No	138.8 (8.5)	137.3 (8.3)	0.490†	52.7 (4.5)	47.6 (3.4)	**<0.001†**	46.3 (4.4)	44.8 (4.9)	0.654†	39.8 (2.4)	39.8 (2.5)	0.788†
Previous experience												
Yes	138.7 (7.5)	138.3 (6.2)	0.744†	52.8 (4.1)	49.5 (3.5)	**<0.001†**	45.9 (3.9)	44.4 (4.0)	**0.043†**	40 (2.7)	40.3 (2.2)	0.640†
No	139 (8.4)	132.2 (6.7)	**0.001†**	52.1 (3.6)	46 (2.8)	**<0.001†**	46.3 (4.9)	44.4 (4.9)	**0.028†**	40.7 (2.8)	39.3 (2.3)	**0.003†**

U* = Urban; R* = Rural. CAI-BR = Caring Ability Inventory Brazilian version; SD = Standard Deviation; † Mann-Whitney test: comparisons between two groups with non-normal distribution. ‡ Student's t-test: comparisons between two groups with normal distribution. § ANOVA (normal distribution) or Kruskal-Wallis (non-normal) tests for variables with three or more categories. Significance level ≤ 5%

In the comparison of the total care ability and its dimensions with the sociodemographic variables, it was found that informal family caregivers in the urban context generally obtained higher averages in the total care ability and in the knowledge dimensions, courage and patience when compared to rural caregivers. This result indicates that the urban context may favor the development of care skills, possibly due to greater access to information, support resources, health services and professionals for clarification.

Among the statistically significant results, it was observed that women from the urban context presented greater knowledge (p<0.001) and courage (p=0.004) in relation to rural women, may suggest that frequent exposure to health services and information related to care can be a factor contributing to better preparation in the performance of the caregiver function.

Concerning age, significant differences were presented in urban and rural informal caregivers aged between 48 and 76 years in the ability of total care (p=0.003), in the dimensions knowledge (p<0.001) and courage (p=0.004) or, in the age group from 18 to 47 years, in the dimension knowledge (p = 0.046). This may show that advancing age may be associated with greater emotional maturity and previous experience, which may favor the coping of care demands.

Regarding education, there was significant difference in total care ability (p=0.047) among informal caregivers from urban and rural contexts with study time of 0 to 6 years. In the knowledge dimension, there was a significant difference in study time from 0 to 6 years (p<0.001), from 7 to 13 years (p<0.001) and greater than 14 years (p=0.013). In the courage dimension, a significant difference was identified in informal caregivers with more than 14 years of study (p=0.018).

These results allowed the observation that the higher the level of education, the greater the ability of total care, as well as the knowledge and courage of urban and rural informal caregivers. These findings may indicate that higher levels of education contribute to a better understanding of the patient's needs and greater confidence in acting before care situations.

In the analysis of the marital situation of informal urban and rural family caregivers, it was noted that, in those with a partner, total care ability (p=0.001), knowledge dimension (p<0.001), courage (p=0.001) and patience (p=0.002) exhibit significant differences. It was also verified that, among caregivers without a partner, there is a significant difference in the knowledge dimension (p=0.023).

These results show that having a partner is associated with greater ability of total care, knowledge, courage and patience. The presence of a companion represents a factor of support and sharing of responsibilities, strengthening emotionally the caregiver and expanding his ability to cope with the demands of care.

Considering the occupational status, significant differences were identified among urban and rural informal caregivers who did not exercise paid activity, both in total care ability (p=0.001), knowledge dimensions (p<0.001), courage (p=0.013) and patience (p=0.037). Thus, it can be verified that these differences suggest that the exclusive dedication to care enables greater involvement and availability to meet the demands of patient care. In addition, informal family caregivers who had work showed a significant difference in the knowledge dimension (p=0.001), which may reflect on the development of technical skills and the resolution of problems acquired in the workplace.

In relation to the income of informal urban and rural caregivers, the results show a significant difference in total care ability (p=0.027), knowledge dimensions (p<0.001) and courage (p=0.020) among those with incomes less than three minimum wages. In the knowledge dimension, there was a significant difference between caregivers who received from four to six minimum wages (p=0.001).

It is evident, thus, that there is a tendency of greater ability to care, especially in the knowledge dimension, when there is higher income. This result suggests that, although the lower purchasing power may be associated with adverse conditions, daily experience in care can favor the development of important practical and emotional skills.

Regarding the variable "lives with", there were significant differences in the ability of total care in caregivers who resided with the patient(s) and other family members (p=0.032), which may indicate that daily living promotes the bond and improvement of care ability. The knowledge dimension showed a significant difference in the variables: caregivers who resided with the care individual (p<0.001), who resided with the care individual and other family members (p<0.001) and caregivers who did not reside with the patient (p<0.001).

The courage (p<0.001) and patience (p=0.019) dimensions showed a significant difference between the caregivers who resided with the patient, which may reveal that physical distancing can limit the practice in everyday experience and the affective involvement necessary in the development of these skill dimensions.

When analyzing the care time of urban and rural informal caregivers, a significant difference was observed in total care ability (p=0.024) and in knowledge (p<0.001) and courage (p=0.002) dimensions in the group of caregivers who had been caring for more than 8 months. In the ability of total care (p=0.026) and in the knowledge dimension (p<0.001), it was found that differences were found in caregivers who cared from 1 to 4 months.

In the group of caregivers who cared for from 5 to 8 months, there was significant difference in the knowledge dimension (p<0.001). In this context, the accumulation of experience over time seems to favor learning, confidence and persistence in the face of daily care demands.

Regarding the period of care of informal family caregivers, full-time care showed a significant difference in the dimensions knowledge (p<0.001) and courage (p=0.030), reinforcing that the continuous contact with the patient contributes to a better understanding of the needs and greater emotional preparation to deal with complex situations. In the knowledge dimension (p=0.003), a significant difference was observed among caregivers who took care of two shifts daily.

Regarding the variable third-party assistance, the results among informal urban and rural family caregivers showed a significant difference among those who received assistance in the ability to provide total care (p=0.001), in the dimensions knowledge (p<0.001) and courage (p=0.001). The knowledge dimension (p<0.001) also showed a significant difference in caregivers who did not receive help from others in care. Support from family or friends can reduce the burden and provide more confidence and emotional balance to play the role of caregiver.

Finally, there is a significant difference in not having previous experience of care in the dimensions knowledge (p<0.001), courage (p=0.028) and patience (p=0.003) and in the ability of total care (p=0.000). This result may indicate that, even without a history of care, family caregivers developed their skills in the face of the need imposed by the patient’s illness, reflecting a process of adaptation and learning.

In summary, the evidence indicates that caregivers of the urban context, predominantly women, with older age and education, with a partner, who did not exercise gainful activity, had lower income, were dedicated to the care had more time and counted with the help of third parties presented higher averages in the ability of total care and in their dimensions knowledge, courage and patience. These findings reinforce the influence of sociodemographic conditions and life context on the development of care ability, demonstrating potentially more vulnerable groups and the importance of support and coping strategies, especially for caregivers in the rural context.

Discussion

The findings of this study showed that informal family caregivers in the urban context presented greater ability to total care, knowledge, courage and patience, thus indicating higher performance in the role of caregiver when compared to rural caregivers.

In the evaluation of the sociodemographic characteristics of informal urban and rural family caregivers, a significant difference was identified between the groups regarding sex, among women, those who were older (48 to 76 years) and had a partner. And urban women presented higher averages in the dimensions knowledge and courage in relation to rural women.

These results indicate that urban women, by the greater exposure to information and experiences related to care, tend to develop greater self-confidence and technical and emotional preparation. These findings are corroborated by the scientific production[16-17] that points out that women, socioculturally, are considered responsible in the process of caring, assuming various roles in the family and activities at home, presenting, thus, greater availability to take care of the house and its relatives.

Although there is no agreement in the literature, since studies indicate that being married may be associated with greater overload, having a support network that includes the partner to share experiences can be constituted, depending on the quality of the relationship, protection factor for the overheed18 and, consequently, to strengthen the care ability.

Concerning the level of education, the analyses revealed that the caregivers with higher level of education showed more ability to total care, knowledge and courage, especially in the urban group. It is emphasized that these aspects can influence positively in the performance of the informal caregiver, in the development of technical skills, in the management of feelings experienced by the informal family caregiver in relation to caring for the other, in the and in the search for effective ways to face oncological treatment.[8]

Regarding the occupational status, there were significant differences between urban and rural caregivers who did not perform paid activity, since commonly, they find it difficult to reconcile the condition of caregiver with the work responsibilities outside the home, with a tendency to move away or reduce the formal working day to devote themselves exclusively to home care.[19]

This condition leads informal caregivers to have greater availability of time to meet the demands of care, with greater ability of care, knowledge, courage and patience. It is also added that not being able to contribute to the family income composition represents one of the main concerns of informal family carers.[20]

The outcomes showed that informal urban and rural family caregivers who did not reside with the individual cared for had lower averages in the dimensions knowledge, courage and patience compared to those who lived in the same household of the patient. This finding suggests that daily living with the dependent family favors the development of the care skill, since it provides greater contact with the physical and emotional demands of the illness process and extends the opportunities for practical learning.

On the other hand, physical distancing can limit the daily experience, reducing affective involvement and familiarity with the patient’s needs. In addition, such differences may be associated with the level of functional dependence of the family caregiver – the lower the need for assistance for basic activities of daily living, the greater the autonomy of the patient[19] and, consequently, the less the need for direct which results in lower averages in the dimensions evaluated of care ability.

In relation to the assistance of third parties, it was identified that caregivers who received help had greater ability of total care and higher averages in the dimensions knowledge and courage, when compared to those who cared alone. This finding reinforces the importance of the support network, which contributes to reducing overload and promotes emotional balance and trust in caregiver function.18 Assistance to informal caregivers usually involves support during consultations, radiotherapy sessions, and chemotherapy, in addition to help with food, dressings, car travel, financial aid, among others.[9]

A study comparing urban and rural family caregivers in different geographic areas of the United States found, among other characteristics, that urban caregivers assume more care responsibilities, possibly due to their easier access to professionals, and have worse health outcomes than their rural counterparts, which could be more resilient, although for these the financial burden is greater.[12]

Also in this context, a study sought to investigate the experiences of rural caregivers in seeking support for their health and well-being while caring for someone with cancer. He identified that participating in the discussions about patient care was a source of support, as it helped to understand its function; however, social isolation during travel for treatment, the fact that their support needs are not recognized and understood by professionals, and they do not know the type of support they could seek, and where, were mentioned as barriers to seeking support and well-being.[21]

In relation to the care period, the data showed that caregivers with more than 8 months of experience presented higher averages in total care ability and knowledge and courage dimensions. This result shows that time spent together and practicing care contributes to the improvement of skills, strengthening confidence, patience and persistence in coping with everyday situations.[8,18,22]

In this context, it is important that there is recognition of the role of the caregiver as relevant to the well-being of the patient(s), those involved in care and regarding the possible wear and tear on their health.[8,22] Among the possible strategies to be developed we highlight the offer of training for informal caregivers to learn about specific care to cancer patients, such as pain management.

Furthermore, providing psychological support services, since they can face stress and overload, and assisting in strengthening the support network within communities. The inclusion of support for caregivers would therefore improve patients' quality of life. Finally, it is understood that integrating health services with social services to provide comprehensive support for caregivers and patients can facilitate access to resources.[8,22]

Since this is a cross-sectional study, this research does not allow establishing a causal chronological relationship between the variables and the outcome. In addition, it is important to highlight the inequality between samples from urban and rural contexts, with lower representativeness of the latter group, which may have reduced the statistical power of the analyses and limit the generalization of the findings. Given the above, the observations may serve as a subsidy in the development of nursing interventions in the practice of care and contribute to the adoption of strategies to improve the ability of care, guide and prepare informal family caregivers to assume the responsibility of caring, considering the particularities of the context in which they are inserted.

Health professionals should consider the adversities of each context and sociodemographic characteristics, as well as the singularities of living, being ill and caring in the rural context, specifically, because they are factors that can influence the care provided to the patient and the ability to care of family caregivers.

Conclusion

The correlations of this study showed that the ability to care informal family caregivers is influenced by several sociodemographic factors. It was contacted that the caregivers of the urban environment, mainly women, with older age and schooling, with a partner, without paid activity, with lower income, who cared for more time, full-time, with the help of third parties and without previous experience of care showed greater ability of total care and higher levels of knowledge, courage and patience.

These differences indicate that the urban context, by offering greater access to information, professional support and health resources, tends to favor the construction of care skills. On the other hand, rural caregivers may face greater challenges, such as geographic isolation and less availability of formal support, which reinforces the need for specific and contextualized support strategies for this population.

References

1. Istilli PT, Teixeira CRS, Zanetti ML, Lima RAD, Pereira MCA, Ricci WZ. Assessment of premature mortality for noncommunicable diseases. Rev Bras Enferm. 2020;73(2):e20180440. doi: 10.1590/0034-7167-2018-0440.

2. Ministério da Saúde (BR). Instituto Nacional de Câncer José Alencar Gomes da Silva (INCA). Estimativas 2023: Estimativa e incidência de Câncer no Brasil [Internet]. Brasília (DF): Ministério da Saúde; 2023 [acesso em 2025 nov 28]. Disponível em: https://www.inca.gov.br/publicacoes/livros/estimativa-2023-incidencia-de-cancer-no-brasil.

3. Koo MM, Swann R, McPhail S, Abel GA, Brookes LE, Rubin GP, et al. Presenting symptoms of cancer and stage at diagnosis:evidence from a cross-sectional, population-based study. Lancet Oncol. 2020;21(1):73-9. doi: 10.1016/S1470-2045.

4. Paz PP, Druzian JM, Duizith DGM, Rossato K, Silveira CS, Siqueira DF. Cuidadores familiares na atenção domiciliar: aspectos sociodemográficos, clínicos e de ansiedade. Rev Enferm UFPE On Line. 2024;18(1). doi: 10.5205/1981-8963.2024.263028.

5. Torres-Tenor JL, Bernal-Hertfelder E, Pertejo-Fernández A, Ramon-Patiño J, Redondo A, Alonso-Babarro A, et al. Frequency and predictors of caregiver burden among patients with cancer receiving palliative cancer treatment. Clin Transl Oncol. 2025;27:3827-32. doi: 10.1007/s12094-025-03885-2.

6. Neller SA, Hebdon MT, Wickens E, Scammon DL, Utz RL, Dassel KB, et al. Family caregiver experiences and needs across health conditions, relationships, and the lifespan: a qualitative analysis. Int J Qual Stud Health Well-being. 2024;19(1):2296694. doi: 10.1080/17482631.2023.2296694.

7. Nkongho N. Caring ability inventory. In: Watson J. Assessing and measuring caring in nursing and health sciences. 2nd ed. New York: Springer; 2009;10:117-24.

8. Siqueira FD, Girardon-Perlini NMO, Andolhe R, Zanini RR, Santos EB, Dapper SN. Caring ability of urban and rural family caregivers: association with overburden, stress and coping. Rev Esc Enferm USP. 2021;55:e03672. doi: 10.1590/S1980-220X2019019103672.

9. Silva TBQ, Fontana DGR, Jantsch LB, Colomé ICS, Costa MC. Home-based caregivers of people with intellectual disabilities in rural settings and their challenges. Cogitare Enferm. 2021;26:e72567. doi: 10.5380/ce.v26i0.72567.

10. Breivik E, Ervik B, Kitzmüller G. Ambivalent and heavy burdened wanderers on a road less travelled: a meta-ethnography on end-of-life care experiences among family caregivers in rural areas. BMC Health Serv Res. 2024:24(1):1635. doi: 10.1186/s12913-024-11875-3.

11. Stratton L, Richter NS, Shelley MC, Margrett JA. Caregiver knowledge of long-term services and supports: effects of rurality and support. Innov Aging. 2020;4:356. doi: 10.1093/geroni/igaa057.1146.

12. Cohen SA, Ahmed NH, Ellis KA, Lindsey H, Nash CC, Greaney ML. Rural-urban and regional variations in aspects of caregiving, support services and caregiver health in the USA: evidence from a national survey. BMJ Open. 2024;7:14(10):e081581. doi: 10.1136/bmjopen-2023-081581.

13. Dal Pizzol FLF, O'Rourke HM, Olson J, Baumbusch J, Hunter K. The meaning of preparedness for informal caregivers of older adults: a concept analysis. J Adv Nurs. 2023;80(6):2308-24. doi: 10.1111/jan.15999.

14. Minosso JSM, Amendola F, Alvarenga MRM, Oliveira MAC. Validation of the Barthel Index in elderly patients attended in outpatient clinics in Brazil. Acta Paul Enferm. 2010;23(2):218-23. doi: 10.1590/S0103-21002010000200011.

15. Kekäläinen T, Luchetti M, Sutin A, Terracciano A. Functional capacity and difficulties in activities of daily living from a cross-national perspective. J Aging Health. 2023;35(5-6):356-69. doi: 10.1177/08982643221128929.

16. Rosanelli CLSP, Silva LMG, Gutiérrez MGR. Cross-cultural adaptation of the Caring Ability Inventory to Portuguese. Acta Paul Enferm. 2016;29(3):347-54. doi: 10.1590/1982-0194201600048.

17. Cohen AS, Ahmed NH, Brown MJ, Meucci MR, Greaney M. Rural-urban differences in informal caregiver resources, caregiving intensity, and health-related quality of life. Innov aging. 2022;38(2):442-456. doi: 10.1111/jrh.12581.

18. Choi JY, Lee SH, Yu S. Exploring factors influencing caregiver burden: a systematic review of family caregivers of older adults with chronic illness in local communities. Healthcare (Basel). 2024;12(10):1002. doi: 10.3390/healthcare12101002.

19. Riffin C, Wolff JL, Estill M, Prabhu S, Pillemer KA. Caregiver needs assessment in primary care: views of clinicians, staff, patients, and caregivers. J Am Geriatr Soc. 2021;68(6):1262-70. doi: 10.1111/jgs.16401.

20. Andrade JJC, Silva ACO, Frazão IS, Perrelli JGA, Silva TTM, Cavalcanti AMTS. Family functionality and burden of family caregivers of users with mental disorders. Rev Bras Enferm. 2021;74(5):e20201061. doi: 10.1590/0034-7167-2020-1061.

21. Johnston EA, Collins KE, Vicario JN, Sibthorpe C, Goodwin BC. "I'm not the one with cancer but it's affecting me just as much": A qualitative study of rural caregivers' experiences seeking and accessing support for their health and wellbeing while caring for someone with cancer. Support Care Cancer. 2024;32(11):761. doi: 10.1007/s00520-024-08947-9.

22. Coppetti LC, Girardon-Perlini NMO, Andolhe R, Gutiérrez MGR, Dapper SN, Siqueira FD. Caring ability of family caregivers of patients on cancer treatment: associated factors. Rev Lat Am Enferm. 2018;26:e3048. doi: 10.1590/1518-8345.2824.3048.

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