

# Factors associated with the skills of informal caregivers in home care

Fatores associados às competências do cuidador informal na assistência domiciliar Factores asociados a las competencias del cuidador informal en la atención domiciliaria de salud

#### ABSTRACT

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**Objective:** To identify factors associated with cognitive, emotional, psychomotor, and relational skills of informal caregivers in home care. **Methods:** A cross-sectional study carried out with a sample of 216 informal caregivers residing in a municipality in the state of Paraná. Data collection took place between February and July 2019, with an instrument developed and validated to assess the skills of informal caregivers. Descriptive and inferential analyses were used. **Results:** The factors associated with a greater competence of informal caregivers were being female, having training in the field, and having more than five years home care experience. The lowest competence was observed in caregivers who had health problems and belonged to the lowest strata of family purchasing power. Participants had lower scores in psychomotor competence and had better results in cognitive competence. **Conclusion:** It was found that women with experience in care had higher levels of competence to provide quality care at home assistance services.

Descriptors: Caregivers; Family; Home Nursing; Clinical Competence; Chronic Disease.

#### RESUMO

**Objetivo:** Identificar os fatores associados às competências cognitivas, emocionais, psicomotoras e relacionais do cuidador informal na assistência domiciliar. **Métodos:** Estudo transversal, realizado com amostra de 216 cuidadores informais, residentes em município do estado do Paraná. A coleta de dados ocorreu entre fevereiro e julho de 2019, com instrumento desenvolvido e validado para avaliação das competências do cuidador informal. Utilizou-se análise descritiva e inferencial para tratamento das variáveis. **Resultados:** Os fatores associados a maior competência do cuidador informal foram sexo feminino, ter capacitação e mais de cinco anos em assistência domiciliar. A menor competência foi observada nos cuidadores que apresentavam problema de saúde e pertenciam aos menores extratos do poder de compra familiar. Os participantes tiveram menores índices na competência psicomotora e obtiveram melhores resultados na cognitiva. **Conclusão:** Identificou-se que mulheres com experiência no cuidado tiveram maiores níveis de competência para realizar uma assistência de qualidade no domicílio.

Descritores: Cuidadores; Família; Assistência Domiciliar; Competência Clínica; Estado Funcional.

#### RESUMEN

**Objetivo:** Identificar factores asociados a competencias cognitivas, emocionales, psicomotrices y relacionales del cuidador informal en la atención domiciliaria. **Métodos:** Estudio transversal, realizado con 216 cuidadores informales, residentes en municipio del estado de Paraná. Recolecta de datos ocurrió entre febrero y julio de 2019, con instrumento desarrollado y validado para evaluación de las competencias del cuidador informal. Utilizado análisis descriptivo e inferencial para tratamiento de las variables. **Resultados:** Los factores asociados a mayor competencia del cuidador informal fueron sexo femenino, tener capacitación y más de cinco años en atención domiciliaria. La menor competencia fue observada en cuidadores que presentaban problema de salud y pertenecían a menores extractos del poder de compra familiar. Los participantes tuvieron menores índices en la competencia en el cuidado tuvieron mayores niveles de competencia para realizar una atención domiciliaria de salud de calidad.

**Descriptores:** Cuidadores; Familia; Atención Domiciliaria de Salud; Competencia Clínica; Estado Funcional.

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# INTRODUCTION

The term "caregiver" can be both formal and informal. In the first case it is conceptualized as referring to a technically qualified person, who has experience to provide care at home and receives remuneration through a formal employment contract<sup>(1-3)</sup>. The informal caregiver, in turn, is an individual who does not have professional training and provides assistance to an acquaintance or a family member, such as a spouse, parent, or child<sup>(3-4)</sup>.

The caregiver's role implies perceiving the other comprehensively, accompanying the daily activities of individuals they care for as well as supporting them emotionally, psychologically, and aiding in their financial management<sup>(3)</sup>. Informal caregivers, usually family members, have an important role in patient care and must often do so with little competence due to a lack of preparation for the situation, either in the care or emotional sense or in the management of the situation<sup>(5-6)</sup>.

Competence can be explained as the ability to act in the different situations of care, solve problems and face unforeseen circumstances, making use of the resources available<sup>(5-6)</sup>. It is subdivided into cognitive, psychomotor, emotional, and relational skills. Cognitive competence comprises the ability to know what are the care needs, and provide care with planning and organization<sup>(7-8)</sup>. The emotional dimension refers to the ability to adapt to different situations that involve caring, and having the psychological conditions to do so<sup>(7-9)</sup>. The psychomotor one includes the skills and manual dexterity necessary to perform care<sup>(5,7,10)</sup>; and, finally, relational competence deals with the construction of effective communication and bonding between informal caregivers and care-dependent family members<sup>(2,5,7)</sup>.

The quality of care provided can be influenced by the caregiver's educational level, the social support they receive and their own conditions, such as their personality, emotional state, and health condition. Literature points out several difficulties faced by informal caregivers regarding the ability to take care, including social involvement, emotional issues (burden, depression, anxiety), among others<sup>(1)</sup>. Such difficulties directly affect their own health and, consequently, the patients'. Thus, their training by the health team is essential<sup>(11-12)</sup>.

The process of education and guidance of informal caregivers, as well as assessment of their skills, contributes to better care at home<sup>(3)</sup>. A quasi-experimental pilot study evaluated the effectiveness of an educational intervention to increase the competence of informal caregivers. The intervention group showed a greater increase in competence than the control group, with significant improvement in almost all variables analyzed<sup>(13)</sup>.

In the present study, the COPER 14 questionnaire was applied, which assesses psychomotor, cognitive, emotional, and relational skills and can be used in everyday care, in order to help professionals in the assessment of the skills of informal caregivers in a comprehensive and multidimensional way. It can contribute to providing guidance and training focused on the demand of these families, considering their weaknesses and strengths<sup>(7)</sup>.

# OBJECTIVE

To assess factors associated with cognitive, emotional, psychomotor, and relational skills of informal caregivers in home care.

# METHODS

## Ethical aspects

The study was carried out in accordance with resolution 466/2012 of the National Health Council, being approved by the Ethics Committee for Research with Human Beings. All participants signed the Free and Informed Consent Form in two copies.

# Study design, period, and location

This is an exploratory cross-sectional research carried out in a municipality in the Northwest of the state of Paraná, Brazil, between February and July 2019. To guide the study methodology, the recommendations of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) were respected. The municipality has a population of 423.666 inhabitants, with a decentralized Primary Health Care (PHC) system formed by 74 Family Health Strategy (ESF) teams covering an estimated 75.87% of the population<sup>(14)</sup>.

#### Sample, inclusion and exclusion criteria

Study participants were informal caregivers of people dependent on home care. A previous survey was carried out on the number of in-home and/or bedridden patients and their respective informal caregivers registered in the FHS teams in 30 Basic Health Units (UBS) from February to April 2019. Nurses and community health agents provided a list of potential participants, which indicated the existence of 1.017 care-dependent patients. Data such as name, address, telephone number and name of the responsible family member were included.

The following inclusion criteria were established: being 18 years of age or older and being an informal caregiver of a person dependent on home care. Were excluded caregivers who lived in the rural areas of the municipality, whose relative who depended on care passed away, or who could not be contacted after three attempts.

Sample calculation considered the 1,017 informal caregivers. Sampling was random with a 5% error estimate, a 95% confidence level, and a 15% compensation for possible losses. As a result, the sample formed included 227 informal caregivers, who were later divided according with the number of people who depended on their care as assisted by the FHS teams from the UBSs of the city. In regard to losses, three caregivers were not found at home, four refused to participate in the research, two were formal caregivers, and in two cases the relative being cared for died, leading to a final sample of 216 informal caregivers.

# **Study protocol**

Data collection took place from May to July 2019, with the application of two instruments. The first was used for an assessment of economic condition, classifying the purchasing power of families into classes AB, C, and DE<sup>(15)</sup>. The second instrument was the questionnaire to assess the informal caregiver's cognitive, emotional, psychomotor, and relational skills (COPER 14).

COPER 14 was developed and validated in  $2019^{(7)}$ , with an assessment of its psychometric properties in  $2020^{(16)}$ , in which structural validity was estimated through exploratory and confirmatory factor analysis; for reliability, internal consistency was verified using Cronbach's alpha ( $\alpha$ ). The instrument was divided in two distinct parts: the first was formed by 13 questions characterizing the informal caregiver; the second, by 14 questions related to knowledge, adaptation and preparation, organized into four constructs of care competencies: cognitive (C), emotional (E), psychomotor (P), and relational (R) competences. In the instrument validation process, the general analysis of the items showed  $\alpha = 0.82^{(16)}$ .

Respondents gave an answer from 1 to 5 in a Likert scale type, considering each domain and constructs. The accuracy of COPER 14 was estimated based on the construction of the ROC curve (Receiver Operating Characteristic Curves), with a confidence interval of 95% in the assessment of the informal caregiver's competence to perform care in the home environment. The area under the curve was 0.783, with a sensitivity of 77.2% and a specificity of 65.9%, with a cut-off value equal to or greater than 3.70.

## Analysis of results and statistics

The data were double input in a Microsoft Excel 2019 spreadsheet and, after correcting the inconsistencies, were analyzed using the software Statistical Package for Social Sciences (SPSS), version 20.0. For the analysis of the results, data normality was identified using the Kolmogorov-Smirnov test, with Lilliefors' correction. The results that characterized the study population were presented in absolute numbers and percentages, according with sociodemographic and economic issues, relationship with the person who receives care at home, whether the caregiver has any health problems, in addition to questions regarding the participant's performance as a caregiver.

Analysis of variance was used to determine the means, standard deviation, and confidence index of the questions of the instruments used. The dimensions "knowledge", "adaptation" and "preparation" were calculated according with the number of questions they contained. The assessment of the level of cognitive, emotional, psychomotor, and relational competence received the same treatment, with the mean of the questions that form each construct.

For the association of variables with the caregiver's skills, the Kruskal-Wallis's test was performed, supported by the diagnosis of non-parametric data distribution. The dependent variables were the means of cognitive, emotional, psychomotor, and relational skills. The predictor variables were those that characterized the participants in this study, according with sociodemographic, economic, family bond, and their role as informal caregivers. The significance of the associations considered *p* values lower than 0.05.

# RESULTS

A total of 216 informal caregivers of people dependent on home care participated in the study. 101 of them (46.8%) were elderly, 181 (83.8%) were female, 119 (55.1%) lived with a partner, and 81 (37.5%) had educational level up to elementary school, with

up to five years of study. As for economic variables, 134 (62.1%) participants had an income of up to two minimum wages, and 128 (59.3%) had purchasing power estimated as belonging to class C under regular conditions (Table 1).

 Table 1 - Sociodemographic and economic profile of caregivers of people dependent on care in home care, Paraná, Brazil, 2019

	n	%
Age		
18-29	7	3.2
30-39	17	7.9
40-49	29	13.4
50-59	62	28.7
≥ 60	101	46.8
Gender		
Female	181	83.8
Male	35	16.2
Marital status		
With partner	119	55.1
Without partner	97	44.9
Educational level		
Without education	16	7.4
Elemental school I (< 5 years)	81	37.5
Elemental school II (5 to 9 years)	32	14.8
High School (10 to 12 years)	73	33.8
College (>12 years)	14	6.5
Socioeconomic class		
AB	55	25.5
C	128	59.3
DE	33	15.3
Family income** Up to 2 Minimum ages	134	62.1
3 to 5	75	34.7
6 to 9	5	2.3
10 or more	2	0.9
	-	012
Family relation Partner	49	22.7
Children	49 96	44.4
Sisters/Brothers	17	7.9
Parent	24	11.1
Others	30	13.9
Health problem		
No	82	38.0
Yes	134	62.0
	151	02.0
Time caring for the patient	00	41 0
Up to 5 years More than 5 years	89 127	41.2 58.8
More than 5 years	127	20.0
Training	202	02.5
No	202	93.5
Yes	14	6.5
Cares for more than one dependent person		
No	182	84.3
Yes	34	15.7

\* The minimum wage in 2019 was considered.

As for the informal caregivers' family relations with people dependent on home care, 96 (44.4%) were sons/daughters who took care of their parents. Of the total number of caregivers, 134 (62.0%) reported having some health condition that required medical care. Regarding assuming the role of caregiver, 127 (58.8%) had been providing care for more than five years, 202 (93.5%) had not received training related to home care activities, and 182 (84.3%) did not provide assistance to more than one person dependent on care (Table 1). Any course or training aimed at home care was considered as training.

On Table 2, the items of the COPER 14 questionnaire, including their dimensions and constructs, are presented. Questions related to knowledge about signs and symptoms of dehydration  $(2.42\pm1.42)$  and the perception of changes in the physiological evacuation of the people they care for  $(2.85\pm1.36)$  were the questions with the lowest results, indicating low competence. The identification of facial expressions  $(4.22\pm1.00)$  and physical limitations  $(4.03\pm0.91)$  showed high levels of competence. Adaptation to the routine  $(3.74\pm1.18)$  presented evaluations similar to the adaptation to exercise the role of caregiver  $(3.76\pm1.17)$ , however, a low level of competence was identified in the two questions that integrate the domain.

The preparation to perform activities such as temperature measurement  $(3.41\pm1.37)$  and the practices of stimulating the autonomy of the care-dependent person  $(3.44\pm1.41)$  had lower rates in the evaluation, evidencing little competence for home care. The constructs that form the assessment instrument had lower rates of psychomotor  $(3.26\pm0.80)$  and emotional  $(3.75\pm1.07)$ 

skills. The caregivers' cognitive skills (3.98±0.80) reached a higher score (Table 2).

Table 3 shows that caregivers from 18 to 39 years old and the elderly have lower results, showing statistically low cognitive competence. The results are similar for males, those who belonged to the DE class of family purchasing power. The same was true for those who did not have familial bonds with the people who depended on their care and those who had not received training for providing assistance as a caregivers.

As for psychomotor skills, younger and older caregivers tend to demonstrate less competence in the construct, accompanied by the male population and those with no schooling or with up to five years of study. In terms of economics, those with low purchasing power, and retired people showed limitations in psychomotor skills. The lack of training to perform care, not having family ties with the people cared for, not providing assistance to other people who require care and having less than five years of experience in the exercise of care had a negative effect on the results of that competence (Table 3).

Table 2 - Distribution of the mean, standard deviation, and confidence interval regarding the competence of caregivers of care-dependent people in home care, Paraná, Brazil, 2019

	M±SD	CI 95%	Competency Level
How do you rate your knowledge to:			
Identify the physical limitations of the person you care for (C)	4.03±0.91	3.91-4.16	BC
Identify signs and symptoms of the worsening of the health of the person you care for (P)	3.13±1.16	2.96-3.32	CR
Identify the feeding needs of the person you care for (P)	3.68±1.13	3.51-3.83	CR
Identify signs and symptoms of dehydration in the person you care for (P)	2.42±1.42	2.20-2.59	CR
Identify the medications that the person you care for uses (C)	3.76±1.21	3.60-3.91	CR
Identify facial expressions that the person you care for may show (R)	4.22±1.00	4.06-4.36	BC
Recognize signs of changes in the person you care for regarding evacuations (P)	2.85±1.36	2.67-3.00	CR
Composite index - Knowledge	3.44±0.72	3.34-3.54	CR
low adapted do you feel:			
To the daily care routine (E)	3.74±1.18	3.58-3.89	CR
To exercise the role of caregiver (E)	3.76±1.17	3.59-3.91	CR
Composite index - Adaptation	3.75±1.07	3.62-3.89	CR
low do you feel about your preparation for:			
Administering/Offering medication (C)	4.21±1.12	4.07-4.36	BC
Assessing the body temperature of the person you care for (P)	$3.41 \pm 1.37$	3.23-3.61	CR
Changing the clothes of the person you care for (C)	3.93±1.26	3.76-4.12	BC
Communicating with the person you care for (R)	4.07±1.05	3.93-4.22	BC
Encouraging the autonomy of the person you care for (R)	3.44±1.41	3.25-3.61	CR
Composite index - Preparation	3.81±0.76	3.71-3.93	BC
Cognitive skills	3.98±0.80	3.87-4.11	BC
Psychomotor skills	3.26±0.80	3.14-3.39	CR
Relational skills	3.91±0.80	3.78-4.01	BC
Emotional competences	3.75±1.07	3.59-3.90	CR

Competences: (C) – cognitive, (P) – psychomotor, (R) – relational, (E) – emotional. M – mean; SD – standard deviation; CI – confidence index; GC – good competence; RC – low competence.

Table 3 - Sociodemographic, economic, and situational variables associated with the skills of caregivers of people dependent on care in the home environment, Paraná, Brazil, 2019

	Total		Cognitive Competence		Psychomotor competence			Cognitive Competence			Cognitive Competence			
	n	%	M±SD	Ranks	p	M±SD	Ranks	р	M±SD	Ranks	p	M±SD	Ranks	p
Age														
18-29 years	7	3.2	4.26±0.75	89.9		3.43±0.91	88.2		4.06±0.90	105.6		3.63±1.30	143.1	
30-39 years	17	7.9	3.71±0.92	96.2		3.00±0.59	126.5		3.80±1.06	121.3		4.35±0.62	92.0	
40-49 years	29	13.4	3.77±1.00	132.8	0.017	3.52±0.90	119.4	0.007	4.11±0.63	123.8	0.073	3.50±1.08	105.4	0.252
50-59 years	62	28.7	4.17±0.65	121.7		3.52±0.84	125.9		4.04±0.75	119.0		3.93±0.92	117.5	
> 60 years	101	46.8	3.83±0.82	96.8		3.03±0.95	93.0		3.75±0.80	95.7		3.67±1.10	104.2	
Gender														
Female	181	83.8	4.08±0.73	115.2		3.37±0.88	114.3		3.98±0.77	114.6		3.77±1.06	109.0	
Male	35	16.2	3.45±0.96	73.7	0.000	2.80±0.99	78.4	0.002	3.47±0.87	77.0	0.001	3.68±1.10	106.0	0.790
													To be co	ontinuec

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Table 3 (concluded)

	Total		Cognitive Competence			Psychomotor competence				gnitive opetenc	e	Cognitive Competence		
	n	%	M±SD	Ranks	р	M±SD	Ranks	р	M±SD	Ranks	р	M±SD	Ranks	р
Marital status														
With companion	119	55.1	3.95±0.82	107.4	0 7 6 0	3.26±0.95	108.6	0.070	3.80±0.79	100.6	0 0 0 0	3.81±1.10	112.5	0.001
Without companion	97	44.9	4.00±0.79	109.7	0.762	3.30±0.90	108.2	0.963	4.02±0.82	118.1	0.039	3.68±1.02		0.281
Educational level														
Without education	16	7.4	3.71±0.87	88.4		2.62±0.74	65.8		3.81±0.67	96.5		3.37±1.27	89.7	
Elementary school I	81	37.5	3.89±0.78	101.1		3.09±1.00	96.3		3.76±0.85	99.9		3.81±1.08		
Elementary school II	32	14.8	4.09±0.87	120.0	0.069	3.45±0.80	120.7	0.001	4.11±0.74	124.1	0.315	3.59±1.18		0.361
High school	73	33.8	3.99±0.79	109.1		3.45±0.86	118.7		3.95±0.78	112.1		3.78±0.97		
College	14	6.5	4.38±0.62	144.8		3.90±0.68	146.9		4.07±0.98	117.9		4.15±0.85		
Family income**														
Up to 2 minimum wages	134	62.0	3.92±0.78	103.9		3.18±0.91	102.3		3.93±0.82	111.2		3.67±1.09	104.2	
3 to 5	75	34.7	4.04±0.87	116.1		3.42±0.95	117.1		3.86±0.76	104.0		3.88±1.01		
6 to 9	5	2.3	4.25±0.55	126.0	0.489	3.60±0.80	129.5	0.261	3.93±1.14	116.7	0.738	3.90±1.14		0.622
10 or more	2	0.9	3.87±0.17	90.8		3.75±0.35	145.0		3.50±1.17	76.8		3.75±1.76		
Occupation														
Employee	44	20.4	4.03±0.92	114.4		3.46±0.92	120.3		4.00±0.85	117.1		3.81±1.09	1113	
Unemployed	101	46.8	4.02±0.76	112.5		3.42±0.89	117.7		3.98±0.75	114.0		3.85±0.98		0 5 2 2
Retired	71	32.9	3.88±0.89	99.2	0.302	2.97±0.91	88.2	0.003	3.71±0.85	95.5	0.092	3.59±1.16		0.522
Purchasing power**		02.0	5100_0107			2007 2007 1	00.2		517 1 20100	2010		010721110		
AB	55	25.5	4.12±0.62	115.8		3.54±0.85	126.1		3.94±0.78	111.7		4.09±0.87	123.8	
C	128	59.2	$4.00\pm0.85$	112.6	0.019	3.28±0.96	120.1	0.003	$3.92\pm0.84$	111.1	0.305	3.73±1.03		0 0 2 3
DE	33	15.3	4.00±0.05 3.63±0.81	80.7	0.019	2.84±0.77	78.7	0.005	$3.73 \pm 0.04$	93.2	0.505	3.28±1.29	86.9	0.025
Family ties	55	13.5	5.05±0.01	00.7		2.0120.77	/0./		5.7520.75	55.E		5.2021.29	00.7	
Parent	24	11.1	3.80±1.02	98.2		3.47±0.95	120.4		4.21±0.76	136.0		3.56±1.35	98.9	
Children	24 96	44.4	$4.22\pm0.71$	127.9		3.48±0.88	120.4		4.21±0.70 3.98±0.84	116.4		3.80±0.99		
Sisters/Brothers	17	7.9	$3.92 \pm 0.61$	93.2	0.002		120.0	0.018	3.75±0.80	94.9	0.012	3.71±1.12		0 934
Companion	49	22.7	$3.82 \pm 0.01$	93.3	0.002	3.00±1.03	91.6	0.010	3.67±0.71	87.9	0.012	3.75±0.10		0.754
Others	30	13.9	3.58±0.92	88.2		2.93±0.80	86.8		3.86±0.82	102.7		3.78±1.06		
Capacitation	50	13.5	5.50±0.72	00.2		2.75±0.00	00.0		5.00±0.02	102.7		5.7 0±1.00	112.0	
No	202	93.5	3.97±0.79	105.0		3.27±0.94	103.7		3.88±0.83	105.9		3.74±1.11	104.6	
Yes	14	6.5	3.97±0.79	158.8	0.002	3.29±0.94	178.5	0.000	3.93±0.78	145.9	0.020		165.4	0.000
	14	0.5	5.97±0.05	130.0		5.29±0.91	170.5		5.95±0.76	145.5		5.77±1.01	105.4	
Health problems	124	(2.0		105.0		2 22 4 0 00	104.0		2.06 1.0.02	106.2		2 6 2 1 1 00	101 0	
Yes No	134 82	62.0 38.0	3.95±0.75 4.00±0.88	105.0 114.3	0.285	3.22±0.90 3.37±0.96	104.8 114.5	0.266	3.86±0.82 3.97±0.78	106.3 112.1	0.505	3.62±1.08 3.97±1.02		0.035
	02	30.0	4.00±0.00	114.5		5.57±0.90	114.5		J.9/±0./0	112.1		5.97±1.02	119.0	
Takes care of someone else	107	04.2	2 04 + 070	105.0		2 21 4 0 02	1047		2 04 10 02	104 1		2 60 1 1 00	105.2	
No	182 34	84.3	3.94±.079	105.9	0.164	3.21±0.93	104.7	0.038	3.84±0.82	104.1	0.016	3.68±1.09		0.077
Yes	54	15.7	4.14±0.87	122.1		3.62±0.84	128.8		4.21±0.66	132.0		4.13±0.84	125.5	
Time caring for someone	~~			o		2 07 0 0 0 0	05.6					2 64 - 4 - 2	00 1	
Up to 5 years	89	41.2	3.83±0.80	95.7	0.012	3.07±0.95	95.6	0.011	3.80±0.84	101.4	0.164	3.61±1.00	99.1	0.060
More than 5 years	127	58.8	4.08±0.79	117.4		3.40±0.89	117.5		3.98±0.78	113.4		3.85±	115.0	

\* The minimum wage of 2019 was considered. \*\* Categorization of monthly household income estimates for socioeconomic strata based on the purchasing power of the household head: AB (good conditions), C (regular conditions), and DE (low conditions).

The assessment of relational skills had lower rates in caregivers who were male, lived with a partner, took care of their spouse, did not receive training for providing care, did not perform the role of caregiver with other people, and had less than five years of experience in the exercise of care. Lower emotional competency ranks were statistically associated with low purchasing power, lack of care training, and health problems that require medical care (Table 3).

# DISCUSSION

The present study showed a predominance of caregivers who were female, elderly, had a partner, little schooling (i.e., less than five years of study), and some health problem. Most participants had never attended a course or training and had been providing care for more than five years. The constructs that make up the assessment instrument had lower rates of psychomotor competence and had better results in cognitive competence.

The factors associated with greater competence were being female, having training, having more than five years in home care, and having high purchasing power. The lowest levels of competence were presented by those caregivers who had health problems, less than five years of schooling, and having the lowest levels of family purchasing power.

It was found that female participants had the highest rates for cognitive, psychomotor, and relational skills compared to males. The caregiver's social role is closely linked to the female figure; and the high prevalence of women in care can be seen in several studies — one of them, carried out in Colombia, confirmed that the female gender is associated with high levels of competence for care<sup>(17-20)</sup>.

In this research, caregivers without a partner had better scores in the relational domain. When the caregiver has a partner, they must use strategies to ensure that the routine, as well as all the difficulties arising from the provision of care, does not affect their relationship; therefore, an additional concern will be part of their lives<sup>(20)</sup>. In addition, a study carried out in Rio Grande do Sul showed higher levels of patience in caregivers without a partner<sup>(18)</sup>.

Caregivers from developed countries have high levels of education, while developing countries have lower educational levels, and in Brazil, a variation from 6 to 11 years of study<sup>(19)</sup> was identified, corroborated by data from this research. The low educational level is a factor that makes it difficult to assimilate knowledge about the disease and proper care practices. From this perspective, the educational level influences psychomotor competence, since more qualified individuals also have better conditions for accessing and searching information, which favoring the development of care skills<sup>(17-18,20)</sup>.

Regarding lower family income levels, there is a situation of vulnerability, because, in addition to financial difficulties, the presence of the sick family member entails high medical expenses. In these cases, it is important for health professionals to strengthen the bond with these families. Once again, the importance of educational and training actions is highlighted, to improve the caregiver's cognitive competence, which proved to be more fragile in families in the DE level of purchasing power<sup>(17)</sup>.

As for the time spent caring for someone, it was shown that the experiences acquired over the years are a form of learning both in the cognitive aspect — in the knowledge that is built — and in the psychomotor one, as the caregiver develops skills to perform daily activities<sup>(18)</sup>.

The information received through courses or training had a significantly positive impact on the development of all assessed competences. Educational interventions show effectiveness in improving the quality of the care provided at home, either through a group approach, through multiprofessional interventions, or through the distribution of materials<sup>(2,5-6,21)</sup>. Therefore, it is worth emphasizing the importance of the support offered by health professionals so that the informal caregiver can offer quality care at home<sup>(3)</sup>.

Most participants in this study had some health problem. Caring for someone demands commitment; consequently, it is not uncommon for self-care to take a back seat to so many obligations to the sick family member. Therefore, a disease in the caregiver can affect their quality of life $^{(20)}$ , which justifies the low levels of emotional competence in this group.

## **Study limitations**

As a limitation of this study, only informal caregivers accompanied by the FHS were identified in the survey, and it was not possible to identify and interview caregivers outside the coverage of the UBSs, nor those from the private sector.

## **Contributions to the Area**

Regarding nursing practice, the use of the COPER 14 questionnaire makes it possible to assess the skills of informal caregivers in all dimensions, helping to verify the weaknesses they present in providing care at home. The importance of support for caregivers by health professionals is highlighted, offering training and qualification that values the skills already acquired and promoting new knowledge based on scientific evidence, in order to guarantee quality care at home.

## CONCLUSION

It was possible to find that participants had lower results in psychomotor competence and scored better in cognitive competence. The factors associated with greater competence to care were being female, having the purchasing power of the AB class, having trained to perform care, and more than five years in the exercise of care. The lowest rates were associated with an educational level of up to five years of study, having a health problem and belonging to the DE class. It is noteworthy that effective communication between health professionals and informal caregivers is essential for them to provide home care in a properly planned and supported manner.

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