Relationship between chronic pain and cognitive status of patients with chronic non-communicable diseases

Relação entre dor crônica e estado cognitivo de pacientes com doenças crônicas não transmissíveis

Relación entre dolor crónico y estado cognitivo de pacientes con enfermedades crónicas no transmisibles

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RESUMO

Objetivo: relacionar a dor crônica e a alteração cognitiva de pacientes atendidos na atenção primária. **Método:** estudo de transversal, quantitativo, amostra n=351 pacientes com doenças crônicas não transmissível. Variáveis: perfil demográfico, socioeconômico, hábitos de vida e variáveis clínicas, parâmetros bioquímicos sanguíneos; cognição avaliada pelo instrumento Mine Exame do Estado Mental; a dor crônica foi avaliada pela Escala Numérica e questionário de McGILL. **Resultados:** prevaleceu a maioria de mulheres, idosas, que tinham Diabetes Mellitus (DM) e hipertensão arterial. A alteração do estado cognitivo afetou 57,5% dos idosos e 53,5% tinham dor intensa. Os descritores de dor de McGILL foram latejante, fina, calor/queimação, doída, cansativa e castigante. Análise de regressão logística foram associadas à dor intensa, ter dor crônica (OR=19,50),) presença de DM (OR=2,40) e sexo feminino (OR=2,12). **Conclusão:** o estado cognitivo alterado afetou mais da metade dos idosos e não teve associação com dor crônica.

Descritores: Dor Crônica; Disfunção Cognitiva; Idoso; Avaliação em Enfermagem; Atenção Primária à Saúde; Cuidados de Enfermagem.

ABSTRACT

Objective: to relate chronic pain and cognitive changes in patients treated in primary care. **Method:** Cross-sectional, quantitative study, a sample n=351 patients with chronic non-communicable diseases, Variables: demographic, socioeconomic profile, lifestyle habits and clinical variables, blood biochemical parameters; cognition assessed by the Mine Mental State Examination instrument; chronic pain was assessed using the Numerical Scale Pain and the McGILL questionnaire. **Results:** most women were elderly, had Diabetes Mellitus (DM) and high blood pressure. Changes in cognitive status affected 57.5% of the elderly and 53.5% had severe pain. McGILL's pain descriptors are throbbing, sharp, hot/burning, aching, tiring and punishing. Logistic regression analysis was associated with severe pain, having chronic pain (OR=19.50), presence of DM (OR=2.40) and female sex (OR=2.12). **Conclusión:** altered cognitive status affected more than half of the elderly and was not associated with chronic pain.

Descriptors: Chronic Pain; Cognitive Dysfunction; Aged; Nursing Assessment; Primary Health Care; Nursing Care.

RESUMEN

Objetivo: relacionar el dolor crónico y los cambios cognitivos en pacientes atendidos en atención primaria. **Método:** Estudio transversal, cuantitativo, una muestra n=351 pacientes con enfermedades crónicas no transmisibles, Variables: demográfica, perfil socioeconómico, hábitos de vida y variables clínicas, parámetros bioquímicos sanguíneos; cognición evaluada por el instrumento Mine Mental State Examination; el dolor crónico evaluaó mediante la Escala Numérica y el cuestionario McGILL. **Resultados:** la mayoría de las mujeres eran ancianas, tenían Diabetes Mellitus (DM) e hipertensión arterial. Los cambios en el estado cognitivo afectaron al 57,5% de los ancianos y el 53,5% presentó dolor intenso. Los descriptores del dolor de McGILL son punzante, agudo, caliente/ardor, doloroso, agotador y castigador. El análisis de regresión logística se asoció con dolor severo, tener dolor crónico (OR=19,50), presencia de DM (OR=2,40) y sexo femenino (OR=2,12). **Conclusión:** el estado cognitivo alterado afectó a más de la mitad de los ancianos y no se asoció con dolor crónico.

Descriptores: Dolor Crónico; Disfunción Cognitiva; Anciano; Evaluación en Enfermería; Atencíon Primaiade Salud; Cuidados de Enfermería.

ORIGINAL

Introduction

According to the World Health Organization, in 2019 the number of elderly people was one billion, with a projection of 1.4 billion in 2030 and 2.1 billion by 2050.[1] Currently, these age groups represent 14.3% of Brazilians, that is, 29.3 million people in the country.2 As a result, the prevalence of Chronic Non-Communicable Diseases (NCDs) in the elderly population increases, which can cause physical, psychological and cognitive damage. Changes in cognitive status may be due to the natural aging process and may be anticipated or aggravated by the presence of uncontrolled NTCD.[3-6]

Although the decrease in cognitive reserves is expected with aging, the prevalence of cognitive impairment in older people is quite varied, from 7.1% to 73.1% in national studies and from 6.3% to 46.0% in international studies, due to being influenced by factors other than aging itself, such as gender, advanced age, marital status, education, quality of life, and chronic pain.[3,5-6]

Chronic pain has been pointed out as one of the factors that influence cognitive decline. Pain is a painful experience, in a multifactorial way, which encompasses physical, emotional, sociocultural and environmental aspects, in addition to being caused and/or intensified by the presence of NCDs, musculoskeletal problems and obesity.[5-6] Chronic pain is pain that lasts or recurs for more than three months, and generally in elderly people, the prevalence is higher than 50.0%.[8]

The neuronal systems involved in the process of cognition are intimately connected to the systems that modulate and perceive pain. As a result, interactions between these neural structures impair the speed at which information reaches the brain and the ability to process, modifying aspects of the cognition of patients suffering from chronic pain, such as attention, memory, and response time. In addition, negative emotional states can alter brain functioning and consequently increase pain-related suffering. [5-6]

Results of one study demonstrated an association between chronic pain in older adults and the cognitive domains attention/orientation (p=0.045) and visual-spatial skills (p=0.017).6 Another study evaluated 6,869 people aged ≥50 years, with a longitudinal association between moderate to severe persistent pain and subsequent cognitive decline. Chronic pain classified as severe was associated with accelerated cognitive decline at a median follow-up of 12 years.[7]

Therefore, it is observed that the relationship between pain and cognitive decline has direct implications in the individual's life, since such dysfunctions affect the psychological and social domain of these people, and can lead to impairments in their quality of life.[3-4,8-10] That said, it is necessary to understand the mechanisms and factors involved in this relationship, as well as the repercussions of cognitive impairment in those who experience chronic pain. In addition, the development of scientific research on this theme can elucidate and confront existing data, in addition to identifying factors that affect chronic pain in elderly people, with a view to minimizing the damage in the daily life of those who live with these alterations. Thus, this study aimed to relate chronic pain and cognitive impairment in patients treated in primary care.

Method

This is a descriptive, cross-sectional, quantitative study carried out in two Basic Health Units (BHU) of an Administrative Regional in the Federal District, Brazil. Those aged ≥60 years; registered and monitored by the UBS, with a medical diagnosis of Diabetes Mellitus (DM) and/or Systemic Arterial Hypertension (SAH), for at least six months to be able to understand and answer the proposed questions. Patients with mental illnesses and neoplasms under treatment were excluded from the study.

The sampling was random and the participants were randomly selected from the UBS registration list. The sample calculation considered a sampling error of 5%, a confidence level of 95% and the possibility of sample loss of 20.0%, resulting in a final sample of 351 participants. Data collection was carried out between July and August 2019.

The team that participated in data collection was composed of nurses and nursing students and had been previously trained. The nursing consultation lasted an average of 40 to 50 minutes, was performed in a private office at the BHU and guided by a structured instrument divided into demographic and clinical data.

A structured instrument was used to assess the demographic and socioeconomic profile, lifestyle habits and clinical variables. Blood was collected for analysis of the following biochemical parameters: glycemia, glycated hemoglobin (HBA1c), total cholesterol, low density lipoprotein (LDL), high density lipoprotein (HDL) and triglycerides. Anthropometric measurements of weight and height were used to calculate the Body Mass Index (BMI).

Cognition was assessed using the Mini Mental State Examination (MMSE), composed of two sections that measure cognitive functions. The first section contains items that evaluate orientation, memory and attention, totaling 21 points, the second evaluates the ability to name, to obey a verbal and written command, to write a sentence freely and to copy a complex drawing (polygons), totaling nine points. The total score is 30 points based on dichotomous items. The cutoff points suggestive of cognitive impairment were related to schooling: 29 for people with at least nine years of schooling, 26 for those with five to eight years of schooling, and 22 for zero to four years of schooling.[9]

Pain was measured by identifying the prevalence and intensity assessed by the Numerical Pain Scale (EN 0-10 points). Chronic pain was classified as pain greater than three months and the quality was described by identifying the pain descriptors of the McGILL questionnaire, a short version validated in Brazil, consisting of 15 descriptors, 11 sensory and four affective. Each descriptor can be selected on a scale ranging from none, mild, moderate to severe.[14]

The data were analyzed using the IBM SPSS Statistics software, version 25.0. Initially, descriptive statistical analysis was performed, with calculation of simple and relative frequencies. To verify differences between proportions, the chi-square test was used. To analyze the variables associated with severe pain, the binary logistic regression model was used. The stepwise method was used

to insert the variables into the model and the selection of independent variables occurred considering the sample size and a minimum significance level of $p < 0.20$. The odds ratio (OR) was calculated, with a significance level of 5% and a confidence interval of 95% to estimate the strength of the association between the independent variables and severe pain. The model's fit level was verified by means of the Hosmer and Lemeshow test.

The research complied with the ethical precepts established by the norms set forth in CNS Resolution 466/2012, and was approved by the Research Ethics Committee of the State Department of Health of the Federal District (SES/DF) with CAEE 50367215.5.0000.555 and approval number (1.355.211).

Results

Of the 351 elderly people evaluated, 77.8% had chronic pain and 57.5% had cognitive impairment. The majority of the sample was female, aged <70 years, with low education (elementary school), income of up to one minimum wage, married, did not drink, did not smoke, was sedentary, had DM and SAH (with ≥10 years of disease) and treated with less than 5 medications for daily use.

We observed that 53.8% reported severe pain, 27.1% moderate pain and 19.1% mild pain or no pain. Sociodemographic and clinical variables were analyzed according to pain intensity. Severe pain was more prevalent in women ($p<0.001$), in those who complained of difficulty sleeping ($p=0.015$) and in those who had DM ($p=0.047$) (Table 1).

Table 1- Sociodemographic and clinical characterization and lifestyle habits according to pain intensity, of participants with chronic non-communicable diseases, (n=351), Brasília, 2021.

	Total (n=351)	**Painless/mild (n=67)**	**Moderate pain (n=95)**	**Severe pain (n=189)**	**P Value**
	n (%)	**n (%)**	**n (%)**	**n (%)**	
Gender					**<0,001**
Female	257 (73,2)	39 (58,2)	63 (66,3)	155 (82,0)	
Male	94 (26,8)	28 (41,8)	32 (33,7)	34 (18,0)	
Age					0,742
< 70 years	227 (64,7)	46 (68,7)	60 (63,2)	121 (64,0)	
≥ 70 years	124 (35,3)	21 (31,3)	35 (36,8)	68 (36,0)	
Education					0,376
Illiterate	46 (13,1)	6 (9,0)	12 (12,6)	28 (14,8)	
Elementary school	231 (65,8)	43 (64,2)	60 (63,2)	128 (67,7)	
Middle school	74 (21,1)	18 (26,9)	23 (24,2)	33 (17,5)	
*Monthly income**					0,611
≤ 1 MW	185 (52,7)	37 (55,2)	53 (55,8)	95 (50,3)	
> 1 MW	166 (47,3)	30 (44,8)	42 (44,2)	94 (94,7)	

	Total (n=351)	Painless/mild (n=67)	Moderate pain (n=95)	Severe pain (n=189)	P Value
Single	45 (12,8)	9 (13,4)	11 (11,6)	25 (13,2)	
Married	189 (53,8)	35 (52,2)	56 (58,9)	98 (51,9)	
Divorced	28 (8,0)	3 (4,5)	10 (10,5)	15 (7,9)	
Widower	89 (25,4)	20 (29,9)	18 (18,9)	51 (27,0)	
Occupation					0,360
Active	113 (32,2)	23 (34,3)	25 (26,3)	65 (34,4)	
Retired	174 (49,6)	29 (43,3)	55 (57,9)	90 (47,6)	
Inactive	64 (18,2)	15 (22,4)	15 (15,8)	34 (18,0)	
Smoking					0,372
Yes	31 (8,8)	3 (4,5)	9 (9,5)	19 (10,1)	
No	320 (91,2)	64 (95,5)	86 (90,5)	170 (89,9)	
Alcohol consumption					0,060
Yes	26 (7,4)	9 (13,4)	8 (8,4)	9 (4,8)	
No	325 (92,6)	58 (86,6)	87 (91,6)	180 (95,2)	
Sedentary lifestyle					0,885
Yes	216 (61,5)	43 (64,2)	58 (61,1)	115 (60,8)	
No	135 (38,5)	24 (35,8)	37 (38,9)	74 (39,2)	
Sleep					0,015
Normal	179 (51,0)	41 (61,2)	55 (57,9)	83 (43,9)	
Difficulty sleeping	172 (49,0)	26 (38,8)	40 (42,1)	106 (56,1)	
DM					0,047
Yes	265 (75,5)	56 (83,6)	76 (80,0)	133 (70,4)	
No	86 (24,5)	11 (16,4)	19 (20,0)	56 (29,6)	
†*DM Time*					0,780
≤ 10 years	253 (72,1)	47 (70,1)	71 (74,7)	135 (71,4)	
> 10 years	98 (27,9)	20 (29,9)	24 (25,3)	54 (28,6)	
HAS					0,600
Yes	311 (88,6)	57 (85,1)	85 (89,5)	169 (89,4)	
No	40 (11,4)	10 (14,9)	10 (10,5)	20 (10,6)	
‡*HAS time in years*					0,619
≤ 10 years	221 (63,0)	44 (65,7)	56 (58,9)	121 (64,0)	
> 10 years	130 (37,0)	23 (34,3)	39 (41,1)	68 (36,0)	
Insulin use					0,719
Yes	59 (16,8)	12 (17,9)	18 (18,9)	29 (15,3)	
No	292 (83,2)	55 (82,1)	77 (81,1)	160 (84,7)	
Medications/day					0,344
< 5	196 (55,8)	35 (52,2)	59 (62,1)	102 (54,0)	
≥ 5	155 (44,2,)	32 (47,8)	36 (37,9)	87 (46,0)	

Legend: *one minimum wage (1 MW=998.00), †Diabetes mellitus (DM) and ‡Systemic arterial hypertension (SAH).

Most of the sample had a high BMI, high total cholesterol, and increased fasting glucose. The biochemical parameters were analyzed according to the intensity of pain of the elderly people (Table 2).

Table 2- Anthropometric and biochemical characterization according to the intensity of pain of participants with chronic non-communicable diseases (n=351), Brasília, 2021.

	Total (n=351)	**Painless/mild (n=67)**	**Moderate pain (n=95)**	**Severe pain (n=189)**	**P Value**
***BMI**	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**0,710**
< 27 kg/m²	114 (32,5)	19 (28,4)	31 (32,6)	64 (33,9)	
≥ 27 kg/m²	237 (67,5)	48 (71,6)	64 (67,4)	125 (66,1)	
Triglycerides					0,695
< 150 mg/dl	199 (56,7)	37 (55,2)	51 (53,7)	111 (58,7)	
≥ 150 mg/dl	152 (43,3)	30 (44,8)	44 (46,3)	78 (41,3)	
Total cholesterol					0,659
< 190 mg/dl	158 (45,0)	27 (40,3)	45 (47,4)	86 (45,5)	
≥ 190 mg/dl	193(55,0)	40 (59,7)	50 (52,6)	103 (54,5)	
‡HDL					0,417
> 40 mg/dl	291 (82,9)	58 (86,6)	75 (78,9)	158 (83,6)	
≤ 40 mg/dl	60 (17,1)	9 (13,4)	20 (21,1)	31 (16,4)	
§LDL					0,933
< 130 mg/dl	232 (66,1)	43 (64,2)	63 (66,3)	126 (66,7)	
≥ 130 mg/dl	119 (33,9)	24 (35,8)	32 (33,7)	63(33,3)	
Glucose					0,056
< 100 mg/dl	116 (33,0)	14 (20,9)	36 (37,9)	66 (34,9)	
≥ 100 mg/dl	235 (67,0)	53 (79,1)	59 (62,1)	123 (65,1)	
†HBA1c					0,571
< 6,5%	197 (56,1)	34 (50,7)	53 (55,8)	110 (58,2)	
≥ 6,5%	154 (43,9)	33 (49,3)	42 (44,2)	79 (41,8)	

Legend: *Body mass index (BMI), ‡High-density lipoprotein (HDL), §Low-density lipoprotein (LDL), †glycated hemoglobin (HBA1c).

The prevalence of severe pain was significantly higher in those with chronic pain (p<0.001). Regarding the McGILL pain descriptors, the most chosen were painful (43.6%), followed by tiring (41.0%), heat/burning (37.0%), thin (36.5) and nausea (33.3%). Those related to intense pain were the sensitive: throbbing, stabbing, thin, colic, bite, heat/burning, painful, heavy and sensitive) and the evaluative (tiring, nauseous, frightening and punishing) (≥0.001) (Table 3).

Table 3- Assessment of chronic pain and pain descriptors from the McGILL questionnaire of participants with chronic non-communicable diseases (n=351), Brasília, 2021.

	Total (n=351)	Painless/mild (n=67)	Moderate pain (n=95)	Severe pain (n=189)	P Value
	n (%)	n (%)	n (%)	n (%)	
Chronic pain					**<0,001**
Yes	273 (77,8)	17 (25,4)	75 (78,9)	181 (95,8)	
No	78 (22,2)	50 (74,6)	20 (21,1)	8 (4,2)	
Descriptors					
Throbbing	109 (31,1)	10 (14,9)	23 (24,2)	76 (40,2)	**<0,001**
Shooting	45 (12,8)	7 (10,4)	11 (11,6)	27 (14,3)	0,660
Stab	80 (22,8)	8 (11,9)	20 (21,1)	52 (27,5)	**0,030**
Thin	128 (36,5)	7 (10,4)	35 (36,8)	86 (45,5)	**<0,001**
Colic	26 (7,4)	2 (3,0)	3 (3,2)	21 (11,1)	**0,017**
Bite	25 (7,1)	4 (6,0)	2 (2,1)	19 (10,1)	**0,045**
Heat/Burning	130 (37,0)	10 (14,9)	29 (30,5)	91 (48,1)	**<0,001**
Crazy	153 (43,6)	9 (13,4)	36 (37,9)	108 (57,1)	**<0,001**
Heavy	116 (33,0)	11 (16,4)	27 (28,4)	78 (41,3)	**0,001**
Sensitive	79 (22,5)	7 (10,4)	17 (17,9)	55 (29,1)	**0,003**
Cracking	36 (10,3)	4 (6,0)	7 (7,4)	25(13,2)	0,135
Tiring	144 (41,0)	9 (13,4)	34 (35,8)	101 (53,4)	**<0,001**
Sick	117 (33,3)	11 (16,4)	30 (31,6)	76 (40,2)	**0,002**
Frightening	62 (17,47)	5 (7,5)	15 (15,8)	42 (22,2)	**0,021**
Punishing	83 (23,6)	6 (9,0)	16 (16,8)	61 (32,3)	**<0,001**

For logistic regression analysis, six variables with p<0.20 were selected: gender, alcohol consumption, sleep, DM, chronic pain, and blood glucose. The variables chronic pain (OR=19.50), presence of DM (OR=2.40) and female gender (OR=2.12) remained associated with severe pain, significantly increasing the risk.

Table 4- Logistic regression analysis of variables associated with severe pain in participants with chronic non-communicable diseases, (n=351), Brasília, 2021.

			†IC 95%	
	P value	***OR**	**Lower**	**Upper**
Female	**0,001**	2,12	1,18	3,81
Alcohol consumption	0,175	1,90	0,75	4,83
Difficulty sleeping	0,135	1,47	0,88	2,43
Diabetes Mellitus	**0,014**	2,40	1,19	4,84
Chronic pain	**<0,001**	19,50	8,71	43,64
Blood glucose ≥ 100 mg/dl	0,265	1,40	0,77	2,53

Legend: *OR = Odds ratio; †CI = Confidence interval; Quality of fit (Hosmer and Lemeshow test): p = 0.983.

Discussion

The profile of the analyzed sample showed elderly women, married, with low education, low income, sedentary, with DM, and SAH and cognitive impairment. Other national and international studies have identified a similar profile.[3,7-8]

Women have been reaching more advanced ages, which predisposes them to be affected by chronic diseases, as well as to impairments in their cognitive abilities related to aging. The process of natural senescence can be aggravated in the presence of chronic diseases, low level of education and sedentary lifestyle throughout life, which can negatively influence the cognitive state.[2-4]

The prevalence of cognitive status impairment in this study was more than half of the elderly people assessed. A higher prevalence of 65.9% was observed in a study conducted with 818 elderly people from a UBS in Rio Grande do Norte [(11)]. On the other hand, a lower prevalence of cognitive deficit was evidenced in another study, such as one that evaluated 135 participants from a geriatric's referral center in the state of Minas Gerais, and showed 22.2% with altered cognitive status.[12]

It is known that cognitive function involves language, motor function, attention, memory, and executive function. These functions should be evaluated in the daily lives of elderly people in view of their performance in health care in their daily lives, especially when health problems such as chronic pain affect these functions.[12-14]

The relationship between chronic pain and cognitive impairment has not yet been fully elucidated by the literature, but it is known that chronic pain can compromise cognitive capacity and behavioral and social skills.[3,6,8] Pain can take away the attention that should be given to the performance of other activities, which can be related to the possible causes of cognitive impairment in patients with persistent pain. In this way, cognitive deficit can affect attention, concentration, performance of daily tasks, memory, learning, information processing speed, psychomotor speed and executive functions.[2,4,6] Another fact to be considered is that patients with altered cognition may have an exacerbated painful experience.[14]

The prevalence of chronic pain observed in this study was higher than the percentage of seventy, which is considered high when compared to the results of other studies with elderly people with NCDs. Elderly people with chronic pain reported it as severe pain and in the logistic regression of this study it was evidenced that severe pain remained associated with chronic pain, DM and the female gender. Another study evaluated 6,869 people aged ≥ 50 years in England, over 12 years, observed an association between cognitive status with severe pain, female gender, DM and chronic pain.[7] Another study carried out in Spain, with 254 patients, identified that women with chronic pain are more affected by cognitive deficit.[15]

In the present study, it was observed that pain intensity was significantly higher in those with sleep difficulties and DM. In a study carried out in two BHUs in the Federal District, with 251 participants with DM2, a prevalence of

pain was identified in 97.6% of the participants, of which women were the most affected. In addition, sleep impairment was found in a greater number of patients with neuropathy who reported waking up at night frequently and continuously due to pain.[14] Pain has been linked to cognitive impairment in other studies.[16-17] Another study corroborating the results found in the present study, identified that sleep problems of elderly men and women in a sample of 1,334 participants, showed that pain, DM and being female was significantly related to having difficulty sleeping.[18]

Pain and sleep are related, as people with pain, especially chronic pain, may have sleep fragmentation and insomnia and/or sleep apnea. Sleep deprivation contributes to insulin resistance, which can uncontrol DM.[4,19] This alteration in sleep pattern may possibly be associated with functional alterations in the cells of the Magno Raphe Nucleus in the brain, which is responsible for modulating both pain and arousal, and is the main trigger of sleep.[20]

In the characterization of pain in this study, the participants chose the sensitive and evaluative McGILL pain descriptors, and the pain was associated with greater pain intensity. Other studies have evaluated pain qualitatively using the McGILL instrument.[14,22]

In this study, the sensitive descriptors had a higher report when compared to the evaluative descriptors. This fact was also observed by another study, which used the McGILL instrument to assess pain in patients with axonal, diabetic or chronic idiopathies.[23] On the other hand, in a study with a sample of 56 women with a mean age of 64.5±3.4, they identified the most chosen McGILL descriptors in situations of elbow flexion and extension and with symptoms of sleepiness, which were the affective descriptors in relation to the sensitives.[24]

The pain identified and/or described by the adoption of affective descriptors may be related to chronic pain and even other health problems, in addition to DM and impairment of cognitive status. Another study conducted with women observed that pain characterized as evaluative may have an influence on the decrease in cognitive reserve.[24]

The cognitive state of human beings undergoes progressive regression at older ages, as approximately 15.0% of people develop progressive cognitive disability, which affects the intellectual capacities of these individuals, impairing the functions of memory, spatial orientation, affectivity, praxis and gnosic functions, among others.[3,14-15,20]

Thus, attention is paid to understanding the pain phenomenon that is related to cognitive impairment. Pain is an unpleasant sensory and emotional experience associated with or similar to an actual or potential tissue injury, described by the International Association for the Study of Pain (IASP).[25] It is important to understand that a preserved cognitive state can contribute to coping with pain and its impairments. In this way, cognitive factors can change the perception of pain from one person to another, as it is a sensory and emotional phenomenon. Thus, analyzing the approach to pain management of an individual with possible cognitive impairment is important, especially for the elderly who may have limitations.[25-26]

In this sense, the need for nurses and other members of the health team to pay attention to recognize that the cognitive state is part of all clinical evaluation and in the conduct of health intervention implementations is

emphasized. Failure to consider the assessment of the real cognitive status can affect the control of health problems, such as the elderly with chronic pain and CNCD. The recognition of this problem is imperative for actions aimed at contributing to the control of the health of this population, especially the elderly who represent age as an intrinsic risk factor for cognitive problems.

As a limitation of the present study, it is evident that a sample with high cognitive impairment and chronic pain, which prevents the comparison of the results. The present study was conducted with a sample of elderly people living in a low-income region of the Federal District, which prevents the generalization of the results. Despite this, it is believed that the present study contributes to the generation of knowledge.

Conclusion

A high prevalence of cognitive deficit and chronic pain was observed. A high prevalence of cognitive deficit and chronic pain was observed. Severe pain was more prevalent in those with chronic pain, females, and those with DM. Longitudinal studies are recommended to better elucidate the relationship between cognitive deficit and chronic pain in older adults.

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