

Prevalence of self-referred chronic pain and intercurrents in the health of the elderly

Prevalência de dor crônica autorreferida e intercorrências na saúde dos idosos

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ABSTRACT

BACKGROUND AND OBJECTIVES: Chronic pain is a public health problem eliciting personal and social losses. This study aimed at identifying the prevalence of chronic pain and its repercussions in the health of the elderly.

METHODS: This was a transversal, population-based study with 416 elderly living in a city in the South of Brazil. Data were collected by home interviews with the Health, Wellbeing and Aging research questionnaire. Chronic pain was considered dependent variable and socio-demographic and health condition characteristics were considered independent variables. Descriptive and inferential data analysis was carried out. Pearson Chi-square and Fisher Exact tests were used for the association between categorical variables, with significance level of 5%. Logistic regression model was used for raw and adjusted analysis.

RESULTS: Chronic pain prevalence was 54.7%, mostly in females (64.8%). Among the elderly with chronic pain, 58.6% have classified their health as regular, poor or very poor, 53.3% did not practice physical activities, 19.8% have mentioned difficulties to perform basic daily life activities and 82.5% have referred pain in lower limbs and 74.8% in lumbar region ($p < 0.001$).

CONCLUSION: Measures to decrease chronic pain in the elderly should be priority, especially in primary health attention services, because this is a multidimensional and complex public health problem.

Keywords: Aging, Health of the elderly, Health services, Pain, Primary health attention.

RESUMO

JUSTIFICATIVA E OBJETIVOS: A dor crônica é um problema de saúde pública que provoca prejuízos pessoais e sociais. O objetivo deste estudo foi identificar a prevalência de dor crônica e a repercussão na saúde dos idosos.

MÉTODOS: Realizou-se um estudo transversal de base populacional com 416 idosos residentes em município no Sul do Brasil. Coletaram-se os dados por inquérito domiciliar com o questionário da pesquisa Saúde, Bem-Estar e Envelhecimento. Consideraram-se como variável dependente a dor crônica; e independente as características sócio-demográficas e as relacionadas às condições de saúde. Realizou-se análise descritiva e inferencial dos dados. Na associação entre as variáveis categóricas, utilizaram-se os testes Qui-quadrado de Pearson e Exato de Fisher, com nível significativo de 5%. Na análise bruta e ajustada, foi utilizado o modelo de regressão logística.

RESULTADOS: A prevalência de dor crônica foi de 54,7%, em sua maioria mulheres (64,8%). Entre os idosos com dor crônica, 58,6% classificaram sua saúde como regular, ruim ou muito ruim, 53,3% não praticavam atividade física, 19,8% apontaram dificuldades para atividades básicas de vida diária e 82,5% referiram dor nos membros inferiores e 74,8% na região lombar ($p < 0,001$).

CONCLUSÃO: Medidas de redução da dor crônica no idoso devem ser priorizadas, em especial pelos serviços de atenção primária à saúde, por se tratar de um problema de saúde pública multidimensional e complexo.

Descritores: Atenção primária à saúde, Dor, Envelhecimento, Saúde do idoso, Serviços de saúde.

INTRODUCTION

In Brazil, population is going through a fast aging process, due to significantly low fecundity rate, low mortality and improved general life conditions, which is expressed by longer mean life expectation and longevity¹.

This phenomenon is often followed by high incidence of chronic and degenerative diseases. As a consequence, there are functional deficits, increased dependence and installation of painful processes^{2,3}.

Pain is defined by the International Association for the Study of Pain (IASP), as an unpleasant sensory and emotional experience, manifested in the presence of real or potential tissue injuries. Pain is subjective and each individual determines its intensity based on previous experiences and on socio-cultural and/or en-

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vironmental factors⁴. Duration determines typification, that is, acute pain is that lasting for no longer than days or weeks while chronic pain goes beyond three months⁵.

Considered a public health challenge, chronic pain affects important part of the elderly population, with perceived personal and financial losses which impair quality of life (QL)^{6,7}. Pain is among major factors able to interfere with QL of the elderly because it limits their activities, increases agitation, risk for stress and social isolation⁸.

It is estimated that 7 to 40% of the world population suffer from chronic pain^{9,10}. The Brazilian Society for the Study of Pain (2014) points that 30% of the population suffer with chronic pain. Brazilian studies with community-dwelling elderly, confirm the high prevalence of chronic pain, estimated in approximately 30%^{9,11-13}. In light of the above, this study aimed at identifying the prevalence of chronic pain and its repercussions in the health of the elderly.

METHODS

This is a cross-sectional population-based study with elderly living in a small city to the South of Brazil. The Basic Attention Information System (SIAB) for the year 2011, of the city's Department of Health, was used to identify and locate studied population. For sample calculation, the acceptable error was 0.05 and confidence interval 95%. To the total, 5% were added to compensate possible losses (non eligibility, refusals, among others). Total sample was made up of 416 elderly. Initially they were listed by dwelling zones and gender, and then selected by random sampling keeping gender proportions for each sector. Inclusion criteria were living for at least six months in the territory of the city; having, during interview, cognitive conditions to answer to the questionnaire and/or presence of a relative or caregiver to help with the answers. Exclusion criteria were individuals not found after three attempts; moving to a different city; death during data collection; eligible individuals refusing to participate. Data were collected in the first semester of 2011, by means of home survey, using the Health, Well-Being and Aging Survey (SABE) questionnaire. In this study, sections A (personal and family information), D (health conditions and lifestyle) and section E (functional evaluation) were analyzed. Dependent variable was that related to the presence or not of chronic pain (pain for more than three months, continuous, or episodes of this pain at least once a month), and independent variables were those related to socio-demographic characteristics and health conditions.

Statistical analysis

Data were submitted to descriptive and bivariate analysis. Chi-square and Fisher Exact tests were used to check the association between categorical variables, and logistic regression model was used for raw and adjusted analysis with effect measures expressed in odds ratio. Significance level was 5%. To be part of the multiple model, variables with $p \leq 0.20$ were considered.

The project was approved by the Research Ethics Committee, Universidade de Passo Fundo, opinion 017/2011, CAAE 0281.0.398.000.11.

RESULTS

Participated in the study 416 people aged ≥ 60 years. From these, most were females (56.7%), with mean age of 69 ± 7.6 years. Chronic pain prevalence was 54.7%, mostly among females (64.8%) ($p < 0.001$), and 66.5 of the elderly lived in the urban area. There has been no significant difference in chronic pain prevalence by dwelling zone, be it urban or rural. Among respondents, most were married (66.5%); however marital status has not interfered with the distribution of chronic pain complaints, as well as the fact of living alone or with companion. Among elderly with income above three minimum wages, 29.8% had no chronic pain, while 17.7% have referred pain ($p = 0.042$). From elderly who worked, 23.8% had no pain, 11.4% yes ($p = 0.001$). Being or not literate made no significant difference in the distribution of self-referred chronic pain (Table 1).

Table 1. Distribution of the elderly with regard to socio-demographic variables and self-referred pain, Estação (RS), Brazil (n=416)

Variables	Chronic pain				p value
	No	Yes	n	%	
Gender					
Male	100	52.9	80	35.2	<0.001
Female	89	47.1	147	64.8	
Age group (years)					
60 - 69	103	54.5	107	47.1	0.092
70 -79	70	37.0	86	37.9	
80 or above	16	8.5	34	15.0	
Dwelling zone					
Urban	128	67.7	148	65.2	0.803
Rural	29	15.4	35	15.4	
Mixed	32	16.9	44	19.4	
Marital status					
Married	141	75.0	164	72.2	0.098
Widow/er	33	17.6	56	24.7	
Single	8	4.3	3	1.3	
Separate	6	3.2	4	1.8	
Living alone					
No	164	86.8	189	83.3	0.320
Yes	25	13.2	38	16.7	
Total monthly income					
No income	10	5.3	20	8.8	0.034
Up to 1 minimum wage	57	30.2	85	37.4	
1 to 2 minimum wages	65	34.4	82	36.1	
3 to 5 minimum wages	51	27.0	36	15.9	
+ than 5 minimum wages	6	3.2	4	1.8	
Currently working					
No	144	76.2	201	88.6	0.001
Yes	45	23.8	26	11.4	
Literate					
Yes	170	89.9	195	85.9	0.211
No	19	10.1	32	14.1	

Among the elderly without chronic pain, 78.7% have self-evaluated their health as very good and good, among those with pain, 58.6%, have classified their health as regular, poor or very poor ($p < 0.001$). When comparing current health with that of one year ago, 40.5% of the elderly considered their health worse ($p < 0.001$). Not practicing physical activity was reported by 53.3% of the elderly with pain and by 31.4% of those without pain ($p < 0.001$). Among chronic pain elderly, 19.8% have reported difficulties to perform basic daily life activities, while 3.7% without chronic pain have reported dependence. ($p < 0.001$) (Table 2).

Table 2. Distribution of the elderly with regard to health and self-referred chronic pain variables, Estação (RS), Brazil (n=416)

Variables	Chronic pain				p value
	No		Yes		
	n	%	n	%	
Health self-evaluation					
Very good/good	149	78.8	94	41.4	<0.001
Regular/poor/very poor	40	21.2	133	58.6	
Comparison with health 1 year ago					
Equal	127	67.2	105	46.3	<0.001
Better	46	24.3	30	13.2	
Worse	16	8.5	92	40.5	
Physical activity					
Yes	129	68.2	106	46.7	<0.001
No	60	31.8	121	53.3	
BDLA					
No difficulty	182	96.3	182	80.2	<0.001
With difficulty	7	3.7	45	19.8	

BDLA = basic daily life activities.

Continuous pain for more than three months was referred by 54.7% of the elderly. As to pain location, 82.5% have referred in lower limbs; 74.8% in lumbar region; 55.8% in upper limbs; 32.3% in neck; 31.3% in head; 19% in abdomen and 11.9% in the chest. Chronic pain especially impairs ambulation (70.9%), sleep (13.7%), taking care of themselves (3.5%), in addition to interfering with mood, appetite and/or leisure (11.9%).

Adjusted analysis has shown significant associations between chronic pain and variables gender (OR=1.76), health self-perception (OR=4.16) and dependence for basic daily life activities (BDLA) (OR= 3.48) (Table 3).

DISCUSSION

Our results have shown expressive proportion of elderly with self-referred pain for more than three months. Chronic pain is a concern for the elderly because it negatively impacts their safety, autonomy and independence, limiting their BDLA or social interaction, with direct impairment of QL¹⁴. A study carried out in São Paulo¹⁵ has found a lower proportion (29.7%) of painful elderly; however authors have considered chronic pain as pain lasting for at least six months.

Chronic pain was more frequent among females. There are evidences that pain is felt differently by males and females. Studies have shown that females have higher pain perception due to differences in control mechanisms, be them excitatory or inhibitory^{16,17}. Genetic, psychological and cultural factors should be also taken into consideration⁵. Similarly, a review study¹⁶ showed that females have lower pain threshold as compared to males after nociceptive stimuli. These results are in line with Brazilian studies^{18,19} and are similar to an investigation carried out in Portugal²⁰.

Table 3. Raw and adjusted analysis of self-referred chronic pain by the elderly, Estação/RS – Brazil

Variables	OR*(CI95%)	p value	OR** (CI95%)	p value
Gender				
Male	1.00		1.00	
Female	2.06 (1.38-3.08)	0.000	1.76 (1.14-2.69)	0.010
Health self-perception				
Very good/good	1.00		1.00	
Regular/poor	5.27 (3.28-8.46)	0.000	4.16 (2.64-6.56)	0.000
Health self-perception compared to 1 year ago				
Better	1.00			
Equal	1.26 (0.74-2.15)	0.378		
Worse	8.81 (3.95-19.64)	0.000		
Current work				
Yes	1.00			
No	2.41 (1.41-4.13)	0.001		
BDLA				
Independent	1.00		1.00	
Dependent	6.43 (2.75-15.02)	0.000	3.48 (1.46-8.29)	0.005
Physical activity				
Yes	1.00			
No	2.45 (1.62-3.71)	0.000		

*OR = Raw odds ratio estimated by univariate logistic regression; **OR: adjusted odds ratio calculated by multivariate logistic regression; BDLA = basic daily life activities.

As to chronic pain site, our results have shown higher prevalence of lower limbs, followed by lumbar region and upper limbs. It seems reasonable to admit the presence of pain in these regions, since it is a common symptom of chronic diseases related to locomotor system, common condition in the elderly population. Similarly, other studies²¹ have indicated lower limbs and lumbar region as primary sites affected by pain in the elderly.

This study results also showed association between chronic pain and practice of physical activities. Preponderant factor for the difficulty of performing physical activities is exactly pain location, since it primarily affects lower and upper limbs, lumbar and cervical spine²². Chronic pain impairs movement, restricts movement amplitude and, as a consequence, becomes a barrier for the practice of physical activity^{15,22,23}.

There has been reference to BDLA impairment when the elderly had chronic pain. These results are in disagreement with those mentioned in the study²⁴, where authors have not found significant differences in BDLA performance, however using a different tool, the Older American Resources and Services, to evaluate dependence levels.

International studies have indicated that pain interferes with functional capacity of the elderly²⁵⁻²⁸. Our results confirm a different population-based study carried out in Brazil, which has pointed to pain in community-dwelling elderly as a determining factor for incapacity¹⁵.

Most painful elderly have classified their health as regular, poor or very poor. Pain is referred as one determinant for negative health self-evaluations among the elderly^{29,30}. Chronic pain leads to worse health perception. There are evidences that people define their health as poor or very poor when there are comorbidities or grievance, which is also the case in the presence of pain³¹. Chronic pain also interferes with individuals' wellbeing and QL, be them elderly or not^{30,32}.

CONCLUSION

It was observed that the prevalence of chronic pain among the elderly was high, especially among females. This complaint directly and negatively affects health self-evaluation and impairs functionality to perform BDLA.

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