Prevalence of chronic pain in Brazil: a descriptive study

Prevalência de dor crônica no Brasil: estudo descritivo

Fernando Holanda Vasconcelos¹, Gessi Carvalho de Araújo²

ABSTRACT

BACKGROUND AND OBJECTIVES: Very little is known about the epidemiology of chronic pain in Brazil; especially in the case of multiple pain prevalence surveys. Knowing about the prevalence of chronic pain in the Brazilian population is an important step in revealing the scope and magnitude of its effects, providing a guide to prevent and intervention strategies, mainly public policies. The objective is to review descriptively the publications made in Brazil to estimate the prevalence of chronic pain in the Brazilian population.

CONTENTS: The search in the indexed database of the Portal of Periodicals of CAPES with the Descriptors in Health Sciences: “Prevalence” and “Chronic Pain” returned, after the screening, a total of 10 articles. The prevalence of chronic pain varied from 29.3 to 73.3%, affecting more women than men and the most prevalent site was the dorsal/lumbar region. Most of the studies showed percentage higher than the estimated for the world population. However, we cannot say that the prevalence of chronic pain in the Brazilian population is higher since the values of the surveys reflect only regional data.

CONCLUSION: The studies found in this review showed a recent interest in the epidemiology of chronic pain in the country, all in the last decade. However, they do not allow an accurate estimate, and more studies are needed to obtain a representative prevalence of the Brazilian population.

Keywords: Chronic Pain, Prevalence, Review.

RESUMO

JUSTIFICATIVA E OBJETIVOS: Muito pouco se conhece sobre a epidemiologia da dor crônica no Brasil; principalmente, tratando-se de pesquisas de prevalência de dores múltiplas. Conhecer sobre a prevalência da dor crônica na população brasileira é um passo importante no sentido de revelar a abrangência e magnitude de seus efeitos, proporcionando um direcionamento para as estratégias preventivas e de intervenção, principalmente políticas públicas. O objetivo deste estudo foi revisar descritivamente as publicações realizadas no Brasil para estimar a prevalência de dor crônica na população brasileira.

CONTEÚDO: A busca se deu na base de dados indexadas do Portal de Periódicos da CAPES com os Descriptores em Ciências da Saúde: “Prevalência” e «Dor crônica» retornou, após a triagem, um total de 10 artigos. A prevalência de dor crônica dos trabalhos variou de 29,3 a 73,3%, tendo afetado mais mulheres que homens e o local mais prevalente foi a região dorsal/lombar. A grande parte dos estudos encontrou uma percentagem maior que a estimada na população mundial, no entanto não se pode afirmar que a prevalência de dor crônica da população brasileira seja de fato maior, uma vez que os valores das pesquisas refletem apenas dados regionais.

CONCLUSÃO: Os estudos encontrados demonstraram um recente interesse sobre a epidemiologia da dor crônica no país, todos da última década; porém, não permitem uma estimativa precisa, sendo necessário mais estudos para se obter uma prevalência representativa da população do Brasil.

Descritores: Dor crônica, Prevalência, Revisão.

INTRODUCTION

Pain is a multifactorial condition, difficult to understand, defined by the International Association for Study of Pain (IASP) as an “unpleasant sensorial and emotional experience associated to a real injury or described in such terms”. When acute, it has an important biological value in preserving the individual’s integrity since it is a symptom that alerts for occurrences of injuries in the body, but the chronic pain does not have this characteristic. Since it causes absenteeism, temporary or permanent disability, morbidity and high costs to the health system, pain has been considered a public health problem. IASP clarifies that best starting point in the differentiation between chronic and acute pain is three months of its occurrence, but for research purposes, it suggests a period of six months. The prevalence of chronic pain in the world is estimated around 10.1 to 55.5%, with a 35.5% average. In Brazil, although there are not many epidemiological studies, the
incidence is similar to that estimated by IASP\textsuperscript{9}. In Spain, research by telephone with 5,000 houses found a prevalence of chronic pain of 23.4\% in the general population\textsuperscript{9}. In Norway, 24.4\% of 4,000 Norwegians respondents stated that they had chronic pain, and 65\% of them reported the pain experience for over 5 years\textsuperscript{9}.

Very little is known about the epidemiology of chronic pain in Brazil, mainly regarding the research on the prevalence of multiple pains. Studies like these that assess pain in several areas of the body are important because they contribute to the identification of susceptibility to pain, they can demonstrate the occurrence of associated pain, allowing a broader view of the phenomenon in the population and providing input to preventive actions plans and organization of the health service\textsuperscript{9}. Studies about the prevalence of specific pain related to the clinic are important to provide new technologies in the management and assessment of pain, but they do not show representativeness of the population for presenting characteristics that make generalization impracticable. Studies with the general population are very valuable. However, it is lack of publications addressing the Brazilian population\textsuperscript{9}.

Knowing the prevalence of chronic pain in the Brazilian population is an important step to unveil the breadth and magnitude of its effect, providing a guide for preventive and intervention strategies, mainly for public policies. The objective of this study was to carry a descriptive review of publications in Brazil to estimate the prevalence of chronic pain in the Brazilian population.

CONTENTS

All indexed articles, written in any language, which reported data on the prevalence of chronic pain in the general Brazilian population or its specific classes, such as students, workers, the elderly etc., were included, regardless the concept of chronic pain established in the study, age or gender, the data collection instruments and the date of publication. Duplicate papers published in different journals were excluded.

The search was on the database indexed in the CAPES Journals Portal using the Health Science Keywords (DeCS): “Prevalence” and “chronic pain” in October 2016. The articles were selected based on the reading of the title or abstract. Those potentially eligible were read in full.

The search found a total of 91 articles. Of these, after the screening, 11 studies were included. One article was excluded because it was published in two different journals, totaling a sample of 10 papers\textsuperscript{9-18}. The total population of the selected studies was 8,508 individuals, of which the samples ranged from 60\textsuperscript{9-10} to 2,297\textsuperscript{12} participants.

The variables of interest were the first author, year of publication, type of study, data collection instrument, sample size, population, age, gender, concept of chronic pain, percentage of prevalence and the most prevalent pain location, that were transferred by one of the authors to the Microsoft\textsuperscript{9} spreadsheet (Table 1). It was not possible to perform the meta-analysis due to the heterogeneity of the papers. All data of interest were analyzed using descriptive statistics.

### Table 1. The prevalence rate of chronic pain in the Brazilian population

<table>
<thead>
<tr>
<th>Authors</th>
<th>Types of Studies</th>
<th>Types of collection</th>
<th>Sample size (n)</th>
<th>Gender</th>
<th>Population</th>
<th>Average age (years)</th>
<th>Concept of chronic pain</th>
<th>Prevalence of chronic pain</th>
<th>Pain site of the highest prevalence</th>
<th>Higher prevalence between genders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krelling, da Cruz and Pimenta\textsuperscript{9}</td>
<td>Cross-sectional</td>
<td>Interview</td>
<td>539</td>
<td>54.1% Female</td>
<td>Working at State University of Londrina</td>
<td>40.5</td>
<td>Lasting for more than 6 months.</td>
<td>61.4%</td>
<td>Head. face. and mouth 26.7%</td>
<td>69.2% Female</td>
</tr>
<tr>
<td>Dellaroza, Pimenta and Matsuo\textsuperscript{10}</td>
<td>Cross-sectional</td>
<td>Home interview</td>
<td>451</td>
<td>64.7% Male</td>
<td>Aged civil servants of Londrina-PR</td>
<td>68.6</td>
<td>Lasting for 6 months or more</td>
<td>51.4%</td>
<td>Back region 21.7%</td>
<td>31.9% Male</td>
</tr>
<tr>
<td>Silva et al.\textsuperscript{11}</td>
<td>Cross-sectional</td>
<td>Interview</td>
<td>211</td>
<td>Not informed</td>
<td>Nursing students of the Federal University of Goiás</td>
<td>21.1</td>
<td>Felt for 6 months or more in the same place</td>
<td>59.7%</td>
<td>Head 28%</td>
<td>97.6% Female</td>
</tr>
<tr>
<td>Sá et al.\textsuperscript{12}</td>
<td>Cross-sectional</td>
<td>Home interview</td>
<td>2.297</td>
<td>55.5% Female</td>
<td>Adults living in Salvador. BA</td>
<td>40.9</td>
<td>More than 6 months.</td>
<td>41.4%</td>
<td>Lumbar region 16.3%</td>
<td>48.4% Female</td>
</tr>
<tr>
<td>Almeida et al.\textsuperscript{13}</td>
<td>Population-based cross-sectional</td>
<td>Interview</td>
<td>205</td>
<td>64.9% Male</td>
<td>Adults diagnosed with schizophrenia attended at a public hospital in the city of São Paulo</td>
<td>37</td>
<td>Not informed</td>
<td>36.6%</td>
<td>Abdomen 30.7%</td>
<td>57.3% Male</td>
</tr>
<tr>
<td>Vieira et al.\textsuperscript{14}</td>
<td>Population-based cross-sectional</td>
<td>Home interview</td>
<td>1.597</td>
<td>66.4% Female</td>
<td>Adults living in the city of São Luís, MA</td>
<td>37.6</td>
<td>Lasting for at least 6 months.</td>
<td>42.3%</td>
<td>Women - head 40.46% Men - lumbar 39.47%</td>
<td>45.4% Female</td>
</tr>
</tbody>
</table>
From the eligible studies, it was observed that the prevalence of chronic pain is a recent concern since the publications refer to the 2006-2015 period. The average age of the population in the studies varied between 21.1\textsuperscript{11} and 77.6 years\textsuperscript{15}. Five of them had conducted exclusively with the senior subjects\textsuperscript{10,15-18}, four with adults also including senior people\textsuperscript{6,12-14} and one with younger individuals, Nursing students\textsuperscript{11}. None included children. The fact that all the studies included or had aged subjects in the studied population returned relatively high prevalence values since the occurrence of pain increases with age\textsuperscript{19}.

The current results show the heterogeneity in the methods, types of studied population and results, preventing any significant data grouping. The preference for classes linked to projects or institutions may have occurred due to the easiness to obtain these samples. The research method used in all studies was the cross-sectional. The data collection of the majority of the studies was a home interview with the subjects. Only 4 were carried out in institutions\textsuperscript{8,11,13,15}. The most interesting result that can be observed in this review is that the prevalence of chronic pain was significant in all studies. The lowest prevalence was in Florianópolis (Santa Catarina) of 29.3\%\textsuperscript{18}, and the highest in Jequié (Bahia) of 73.3\%\textsuperscript{15}. Although most of the studies\textsuperscript{10,16-18} present a percentage higher than the estimated for the world's population\textsuperscript{5}, one cannot say that the prevalence of chronic pain in the Brazilian population is larger, since the values only reflect regional data. A literature review on the prevalence of chronic pain in Hol-

<table>
<thead>
<tr>
<th>Authors</th>
<th>Types of Studies</th>
<th>Types of collection</th>
<th>Sample size (n)</th>
<th>Gender</th>
<th>Population</th>
<th>Average age (years)</th>
<th>Concept of chronic pain</th>
<th>Prevalence of chronic pain</th>
<th>Pain site of the highest prevalence</th>
<th>Higher prevalence between genders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reis, Torres and Reis\textsuperscript{15}</td>
<td>Cross-sectional</td>
<td>Interview</td>
<td>60</td>
<td>50%</td>
<td>Male</td>
<td>77.6</td>
<td>Not informed</td>
<td>73.3%</td>
<td>Back</td>
<td>58.4% Male</td>
</tr>
<tr>
<td>Dellaroza et al.\textsuperscript{14}</td>
<td>Cross-sectional</td>
<td>Home interview</td>
<td>172</td>
<td>40.7%</td>
<td>Female</td>
<td>68.9</td>
<td>Lasting for more than 6 months</td>
<td>62.2%</td>
<td>Lower limbs</td>
<td>31.4% Female</td>
</tr>
<tr>
<td>Dellaroza et al.\textsuperscript{17}</td>
<td>Cross-sectional</td>
<td>Home interview</td>
<td>1,271</td>
<td>59.6%</td>
<td>Female</td>
<td>69.5</td>
<td>Lasting for 6 months or more</td>
<td>29.7%</td>
<td>Lumbar region</td>
<td>25.4% Female</td>
</tr>
<tr>
<td>dos Santos et al.\textsuperscript{19}</td>
<td>Cross-sectional</td>
<td>Home interview</td>
<td>1,705</td>
<td>62.5%</td>
<td>Female</td>
<td>70.7</td>
<td>Lasting for six months or more of continuous character or recurrent</td>
<td>29.3%</td>
<td>Not informed</td>
<td>62.5% Female</td>
</tr>
</tbody>
</table>

CONCLUSION

The studies found showed recent interest in the epidemiology of chronic pain in the country, all of them in the last decade, but there is still the need for further studies to obtain a representative prevalence in the Brazilian population. It was not possible to state that the prevalence of chronic pain in the Brazilian population is in the interval found in the studies due to the heterogeneity and regionality of the studies.

REFERENCES


