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Profile of workers with lumbar affections attended at a health service

Perfil de trabalhadores com lombalgia atendidos em um serviço de saúde

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ABSTRACT | INTRODUCTION: The changes in the world of work haved a significant impact on tasks, capturing versatility and increasing the pace of work, causing an increase in low back pain. OBJECTIVE: To describe the profile of workers with low back pain treated at a unit specialized in Occupational Health in Baixada Santista. **METHODS:** This is an observational cross-sectional and exploratory study. A documentary analysis of the open records of workers attended at the Reference Center for Occupational Health (CEREST), in Santos-SP, from July 2014 to July 2015 was carried out, with a list of low back pain and diagnosis in the following clinical methods for "Other dorsopathies" (M51 to M54) according to ICD-10. The data were selected: demographic, clinical variables, professional categories, among others. **RESULTS:** Of the 502 medical records, 21.9% (n = 110) reported complaints of low back pain and clinical diagnosis by ICD-10. There was a predominance of females (58.2%), aged between 35 and 45 years (50.9%) and low education, with incomplete primary education (35.4%). Still, 23.7% of individuals were absent from work and 85.0% were registered on the work card (CLT). The most prevalent professional categories were domestic services, 28.3% (n = 31) and cleaning activities, 19.1% (n = 21). Of the subjects, 68.2% had assistance from physiotherapists. **CONCLUSION:** The prevalence was higher in women, in workers trained and away from work, in the sector of domestic services and cleaning activities, in low education and in the age group considered productive for work.

KEYWORDS: Spinal diseases. Lumbar pain. Worker's health. Health service. Public health.

RESUMO | INTRODUÇÃO: As transformações no mundo do trabalho têm propiciado o acúmulo de tarefas, exigências de polivalência e aumento do ritmo de trabalho, ocasionando um aumento de lombalgias. **OBJETIVO:** Descrever o perfil de trabalhadores com lombalgia, atendidos em uma unidade especializada em Saúde do Trabalhador da Baixada Santista. **MÉTODOS:** Trata-se de um estudo observacional transversal e exploratório. Ocorreu análise documental de prontuários abertos de trabalhadores atendidos no Centro de Referência em Saúde do Trabalhador (CEREST) de Santos-SP, no período de julho de 2014 a julho de 2015, com queixa de lombalgia e diagnósticos nosológicos estabelecidos para "outras dorsopatias" (M51 a M54) segundo a CID-10. Foram obtidos os dados: demográficos, variáveis clínicas, categorias profissionais, entre outras. **RESULTADOS:** De 502 prontuários, 21,9% (n=110) apresentaram queixa de lombalgia e diagnóstico clínico pela CID-10. Houve predomínio do sexo feminino (58,2%), na faixa etária de 35 a 45 anos (50,9%) e baixa escolaridade, com ensino fundamental incompleto (35,4%). Ainda, 23,7% dos sujeitos estavam em situação de afastamento do trabalho e 85,0% com registro em carteira de trabalho (CLT). As categorias profissionais mais prevalentes foram de serviços domésticos, 28,3% (n=31) e atividades de limpeza, 19,1% (n=21). Dos sujeitos, 68,2% tiveram assistência de Fisioterapeutas. **CONCLUSÃO:** A prevalência foi maior no sexo feminino, de trabalhadores formais e afastados do trabalho, do setor de serviços domésticos e atividades de limpeza, de baixa escolaridade, e com a faixa etária considerada produtiva para o trabalho.

PALAVRAS-CHAVE: Doenças da coluna vertebral. Dor lombar. Saúde do trabalhador. Serviço de saúde. Saúde coletiva.

Introduction

Precariousness of work has been advancing, with greater exploitation of work and a decrease in social support for workers, following the new logic of capital management, and with this many illnesses have been emerging among workers[1]. This affects quality of life and has caused work-related musculoskeletal disorders (WMSDs) and occupational low back pain in workers from different professional categories who perform activities with psychosocial demands and physical work overload, such as strength, repetition and inadequate postures[2].

In this sense, occupational diseases include dorsopathies, being a public health problem in several countries and causing economic losses to society[3]. Dorsopathies are mainly categorized into: cervicalgias, chest pain, intervertebral disc disorders, spondylosis, radiculopathy and low back pain, which are the most common[3]. Lumbar spine diseases have been one of the main causes of disability and absence from work activities due to illness[4]. Approximately 60% to 80% of the population is affected by low back pain during life[5].

Low back pain is characterized by pain referred between the coastal margins and the gluteal fold, and usually accompanied by painful limitation to movement, in addition to being considered an important public health problem, given that it can interfere in social, economic, professional relationships and cultural[6]. Still, it is considered the major cause of work-related health disorders, incapacitating workers under 45 years of age, and can also cause premature disability[7].

There are several risk factors for low back pain. Occupational risk exposures include prolonged periods of sitting, intense and heavy physical work, demands for rotational movements and trunk flexion during activities, pushing and pulling objects, in addition to exposure to whole body vibration[8]. There are also factors related to the organization of work, such as fast pace, repetitive movements, lack of appreciation of work by the boss and other professionals, and conflicting issues of interpersonal relationships and teamwork[9]. Some professions are risky for low back pain, among them are: bus drivers, mechanics, machine operators, and workers linked to the general services and cleaning sectors[7].

It should be noted that low back pain becomes chronic when symptoms are recurrent for more than 12 weeks, and about 5 to 10% of cases of acute low back pain become chronic[10]. Chronic low back pain causes an increase in spending on health resources, as well as absences and absences from work generated by disabilities in physical, mental and social functions[6]. Chronic low back pain often prevents the satisfactory performance of activities of daily living, such as work and even leisure, making the affected subjects feel afraid to perform their activities[11].

This study aimed to describe the profile of workers with low back pain, treated at a unit specialized in Occupational Health in Baixada Santista.

Methods

This is a cross-sectional, exploratory, descriptive and quantitative study. It was carried out in an Reference Center for Occupational Health (CEREST), in the city of Santos-SP. This service is part of the National Network of Comprehensive Attention to Workers' Health (RENAST) and assists workers with suspected illnesses that are related to work or subjected to threats, whether physical or mental, of any professional category, with or without a formal contract, linked to public or private services, as well as self-employed or unemployed. In addition, CEREST of Santos is a regional unit that was created in 1990, with a territory of scope and actions that aggregate the municipalities of Santos, São Vicente and Praia Grande.

There was a survey of data from open medical records of workers assisted in this service, from July 1, 2014 to July 1, 2015, with the following selection criteria: complaint of low back pain in initial medical consultation, of both sexes, and with range between 35 and 55 years old. The choice of this period was due to the progress of a project with the performance of physiotherapists and carried out with workers with low back pain at the time. After selecting the medical records, the following data were obtained: demographic (age, sex, education and municipality of residence); profession, complaint at initial consultation, clinical diagnosis; and if there was a referral for physical therapy treatment.

The diagnoses were grouped, according to the International Classification of Diseases (ICD-10), and subjects with clinical diagnoses regarding "other dorsopathies" (M50 to M54) were selected for the analysis of this study. For professional categorization, the professional sector/activity was used, according to the National Classification of Economic Activities (CNAE), which is an instrument used by the Brazilian Institute of Geography and Statistics (IBGE), applied to all economic agents involved in production goods and services. The data were recorded in the Microsoft Excel® program and then a descriptive analysis of the data was performed using the R Development Core Team® software, in which the categorical variables were presented in tables of absolute and relative frequencies.

The study was duly conducted under ethical principles, with the approval of the Research Ethics Committee of the Federal University of São Paulo (UNIFESP), under opinion number 44711715.8.0000.5505.

Results

502 open medical records of workers who were attended at CEREST in Santos, from July 1, 2014 to July 1, 2015, were analyzed. Of these medical records, 21.9% (n=110) workers complained of low back pain at the first medical appointment and the clinical diagnosis established by ICD-10 between M51 to M54. Table 1 shows some registered socio-demographic data and employment status.

Table 1. Sociodemographic data and employment status of workers

Variables	N (110)	%
Sex		
Female	64	58.2
Male	46	41.8
Age Range		
35 to 45 years	56	50.9
46 to 55 years	54	49.1
Schooling		
Incomplete Elementary School	39	35.4
Complete Elementary School	13	19.1
Incomplete High School	10	11.1
Complete High School	21	23.3
Higher Education	7	6.4
No Information in the Medical Record *	20	18.1
Employment situation		
Away from Work (INSS)	19	17.3
Active	10	9.1
On sick leave	7	6.4
Unemployed	9	8.2
No Information in the Medical Record *	65	59

* Some medical records had no registration

According to the data shown in table 1, the majority (58.2%) of the workers were female. Some subjects were on sick leave from work by the National Social Security Institute (INSS) (17.3%), some on sick leave (6.4%), and others were active at work (9.1%). In addition, 85.0% of the subjects had registration in the work card (CLT). In addition, the majority of workers lived in the city of Santos-SP (96.3%).

Table 2 shows the clinical diagnoses found with the subjects.

Table 2. Clinical diagnoses of workers found and established between M50 to M54 (ICD-10)

	Clinical Diagnostics (ICD-10 Codes)	N (110)	%
M54.5	Low Back Pain	60	54.5
M51.2	Other Specified Intervertebral Disc Displacements	37	33.6
M54.4	Lumbago with Sciatica	20	18.2
M54.6	Thoracic spine pain	14	12.7
M51	Other intervertebral disc disorders	11	10.0
M54.2	Cervicalgia	8	7.3
M54	Dorsalgia	4	3.6
M50.8	Other Cervical Disc Disorders	4	3.6
M53.1	Cervicobrachial Syndrome	4	3.6
M51.1	Thoracic, Thoracolumbar and Lumbosacral Intervertebral Disc Disorders with Radiculopathy	3	2.7
M50.3	Other Cervical Disc Degeneration	1	0.9
M51.4	Schmorl's Nodes	1	0.9
M54.1	Radiculopathy	1	0.9
M54.8	Other Dorsalgia	1	0.9
M54.9	Dorsalgia, Unspecified	1	0.9

Obs.: Some subjects presented more than one clinical diagnosis.

The most prevalent clinical diagnoses among workers were M54.5 (low back pain) with 54.5%, M51.2 (other specified intervertebral disc displacements) with 33.6%, and M54.4 (lumbago with sciatica) with 18 ,2%. In addition, 39.1% had more than one clinical diagnosis related to "other dorsopathies".

Table 3 shows the data related to professional activities, according to the National Classification of Economic Activities (CNAE).

Table 3. Professional categories of workers according to CNAE

Sector/Professional Activity	N (110)	%
Domestic services	31	28.3
Cleaning activities	21	19.1
Other sectors	15	13.6
Supply and management of human resources to third parties	11	10.0
Advertising	5	4.5
Storage, loading and unloading	4	3.6
Surveillance, private security and cash transportation activities	3	2.7
Other specialized construction services	3	2.7
No Information in the Medical Record	17	15.5

The sector/work activity most found was that of "domestic services", with 28.3%, followed by "cleaning activities", with 19.1%, and "other" with 13.6%. Several professions were found in the medical records, among them: cleaning assistant (10.0%), domestic worker (10.0%), cleaning lady (7.2%), bagger (4.5%). Among the other activities were: general assistant, general services assistant, truck driver, cook, caregiver of the elderly, vigilant with percentages ranging from 0.9 to 1.8%. In addition, it should be noted that in only 8.1% of the medical records there was a record of a work accident report (CAT).

In addition, 68.2% received physiotherapeutic treatment, and the rest, 31.8% only had an indication for drug treatment. And of the subjects who were referred to a physical therapist, most were female (58.7%).

Discussion

Many workers complained of low back pain at an initial consultation, but without the conclusive record of a clinical diagnosis, for this reason only 110 medical records were selected. It would be important for the service and user to obtain a clinical diagnosis for the treatment, as well as a functional and physiotherapeutic diagnosis, however the subjects did not always return to the service with the requested clinical exams, perhaps because they were "lost" in the service network, indicating difficulties the intersectorality between health services, with the need for further investigations in this regard. In another study carried out at the same service, low back pain was also prevalent among workers and 8.8% of the medical records analyzed (n=431) also did not include an established clinical diagnosis[12].

Regarding sex, most workers were female. There is a higher prevalence of low back pain in females, and tending to greater progression, the greater the age[13]. The high prevalence of low back pain in females may be due to the fact that women are exposed mainly to repetition, vicious position, and work with demands for high speed in movements and repetitions[6,8,9,14,15].

Several professional categories have already been identified with higher prevalence for low back pain, many of them performed mainly by women, such as services in the domestic, cleaning, food, informal (day laborers) and textile (dressmakers) sectors[2].

In addition, most workers were over 40 years old. Chronic low back pain is more common in the age groups above 40 years[6,8,10], and there are relationships between increasing age and a higher frequency of disability due to low back pain, due to the fact that aging tends to cause degenerative changes and spinal column[6,8]. In relation to females, women would be more exposed to greater ergonomic loads and with repetitive work[3], justifying, among other factors, the high incidence of low back pain. Another risk factor is related to low education and less specialized professions that do not require many qualifications[6].

Of the medical records that contained information on the level of schooling (81.9%), the majority (65.6%) had low schooling, considered up to incomplete high school. Despite this, low education is one of the risk factors for low back pain because it predisposes workers to demands at work with physical and repetitive efforts[16]. Schooling has been considered an important risk factor for low back pain, being inversely correlated, that is, the lower the schooling, the greater the tendency to low back pain and the higher the schooling, the lower the probability[8]. Hartvigsen et al. (2018)[8] suggest that the mechanisms that explain the effects of low schooling on low back pain include environmental and lifestyle exposures in different socioeconomic groups, less knowledge and health education, which are not available or adequately targeted at people with low schooling. They also reinforce that, in the routine of people with low education, both at home and at work, it is common to have different occupations and an increase in the physical workload, which are also risk factors for low back pain.

Regarding the work situation, and the medical records that contained this registration, 17.3% were in a situation of absence from work, which may be linked to the chronicity of the disease, which can make it difficult to re-enter the job market[17]. This situation of being away from work can cause suffering to

workers, due to the loss of their social role, difficulties in domestic chores, previously easily accomplished, and the possible family conflicts resulting from the physical limitations imposed by the disease[11].

Idiopathic low back pain was the first cause of disability and sickness benefits in Brazil, and the diagnosis of Dorsalgia (M.54) had a high incidence, due to the lack of specification of the pain site[16]. It is understood in this way that the absence of clinical diagnosis expressed in the medical record can be a factor of difficulty for investigative and clinical deepening for the physiotherapists, reflecting on improvements in the records of the medical records. Regarding the clinical diagnoses mentioned, the most prevalent were: M54.4 with 54.5%, M51.2 with 33.6%, and M54.4 with 18.2%. The diagnosis of low back pain (M54.5) is within the dorsalgia subclass (M54). And low back pain is among work-related diseases[18].

Regarding the sectors/activities registered, almost half of the workers (47.4%) were linked to the domestic services and cleaning activities sector. In some studies, higher prevalence of low back pain has already been pointed out in workers who perform the cleaning activity[11,16,19,20]. Several occupations, many linked to poor working conditions, are related to the presence of low back pain. With the changes that have occurred in the world of work, there have been in various sectors of society, with insurgency of informality, flexibilities, multitasking and precarious working conditions, guided by neoliberal policies, based on the statements of global economic development[1]. As a result, low back pain and functional disabilities become an object of great concern in public policies, especially in poor or developing countries, such as Brazil. Disability due to low back pain is greater in the productive age groups for work worldwide, which is especially worrying in low and middle income countries where informal employment is common and the possibilities for modifying employment are limited[8].

In addition, a low percentage (8.1%) of notification for occupational accidents was noted, which may possibly be linked to underreporting by CAT. Figueira et al. (2017)[20] express that the notifications of accidents at work do not reflect the reality, with an estimate that for each notified case, nine were not notified. They reinforce that situations related to musculoskeletal disorders tend to be hidden, since the causal

relationship with work is not considered simple. Still, although there are other ways to issue the CAT, this situation is usually under the employer's decision, and it is also important to analyze the behavior of employers in relation to communications and also about preventive actions, with greater inspections, investigations and studies.

In the context of referrals for physical therapy treatment, 68.2% of workers were referred. The treatments for low back pain performed by physiotherapists are very important, being essential in chronic cases, as they aim at a better quality of life for patients[21-23]. In addition, the majority of workers referred to this service were female. The highest percentage of demand for physical therapy treatment is women, when compared to men, an aspect that indicates a cultural pattern, where women are more concerned with care than men[22], a situation that deserves further study in future studies.

The study had limitations, because it is a single health service and the selection of a group of clinical diagnoses over a given period. One difficulty found was the lack of information on some data in the medical records (data on education and current employment situation), with the service being notified at the time, aiming at improvements. However, the importance of this information is emphasized for future deepening, as well as a greater performance and engagement of physiotherapists, with analysis and perspective to assess the functional health of the subjects, and the international classification of disability and functionality in health can also be used (ICF).

Conclusion

The study made it possible to describe the data on the profile of workers affected by low back pain and treated at a specialized worker health service in Baixada Santista. The prevalence was higher among women, formal workers and those away from work, in the domestic service sector and cleaning activities, with low schooling, and with age group considered as productive for work. Future research can deepen the information brought with workers with low back pain, and in other health services.

Author contributions

Simas JMM participated in the analysis of the research data, interpretation of results and writing of the scientific article. Ramos MCVA participated in the research data collection and data interpretation. Souza FG participated in the statistical analysis of the research data and interpretation of the results. Alencar MCB participated in the conception, design, analysis and interpretation of the research data, and writing of the scientific article.

Competing interests

No financial, legal or political competing interests with third parties (government, commercial, private foundation, etc.) were disclosed for any aspect of the submitted work (including but not limited to grants, data monitoring board, study design, manuscript preparation, statistical analysis, etc.).

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