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RESEARCH ARTICLE

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INVESTIGATION OF ERGONOMIC RISKS IN A COMMUNITY HEALTH AGENT: A CROSS-SECTIONAL STUDY

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ABSTRACT

The main purpose of the article is to investigate the ergonomic risks of Community Health Agent (CHA) and identify musculoskeletal diseases acquired in the work process of these professionals in São Gonçalo do Amarante, Ceará, Brazil. To achieve the goal we chose an exploratory, descriptive study with a quantitative approach. The study population consisted of 117 Community Health Agents (CHA) and the sample 87 with CHA as an inclusion criterion all CHA rural and urban areas of the municipality. It was found that the prevalence of musculoskeletal pain reported by ACS's was, back pain and leg, with 57.44% of this pain related to work after the service and 27.58% for. However it was observed that the different individual characteristics and lifestyles cause the relationship between remote and the Physical Activity and Pain Relationship musculoskeletal and Physical Activity is varied and difficult to analyze because the profession of CHA is directly related with their own ability and physical fitness.

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INTRODUCTION

The community health agent (CHA) is a worker who works in two important programs of the Ministry of Health Community Health Agent Program (PACS) and the Family Health Program (PSF). The community health agent stood out as an important element of family health actions, contributing to the identification of several health problems in families¹. Therefore, the Community Health Agent (CHA) has become an extremely important professional for the primary care model throughout Brazil, since it acts within public policies as an essential link between the community and services.

Their relevance in the context of the actions of the Unified Health System demands recognizing them as deserving a look focused on their living and working conditions, aiming at expanding the knowledge of occupational exposure situations, as well as the behaviors that may represent risks to their quality of life². Work should be understood as any effort that man makes to achieve his goals in line with ethical principles, using his physical and mental capacity³. Some authors consider risk to be any and all possibilities that may cause damage to the worker's health arising from some element or circumstance existing in the work process and in the environment, whether due to accidents, illnesses or suffering of workers, or even due to environmental pollution, and risks

at work can affect not only the physical body, but the worker as a person and part of a family. Problems such as physical fatigue, poor posture, static work, repetition of movements, repetitive strain injury (RSI); various pains, feeling tired and other non-specific symptoms may be due to exposure to different risks⁴. Thus, all aspects that are directly or indirectly involved in the individual's health must be analyzed and considered. Public policies and intervention measures in the population's health-disease process must be goals of government officials and health workers in order to promote the health of workers. In this context, Occupational Health is inserted through Federal Law nº8080 / 90 as the field of action of the Unified Health System, clarifying the competences of the three spheres of government. According to the changes and concerns with the worker's health, community health agents appear, one of the several categories that led the new work relationships of the 90's.

In Brazil, currently, more than 200 thousand community health agents are working, of which more than 15 thousand in Ceará, contributing to the improvement of people's quality of life, with health promotion and surveillance actions, but this CHA suffers from several occupational diseases, but little investigated⁶. Given the above, we seek to build a job that can help to classify and understand about the job and the risks to which these workers are exposed during their period of work. Thus, the objective of this study was to investigate the ergonomic risks of the Community Health Agent (CHA) as well as to identify the musculoskeletal complaints acquired in the work process of these professionals in a municipality in the state of Ceará.

METHODOLOGY

To achieve the objective of knowing the ergonomic risks in Community Health Agents, a descriptive study with a quantitative approach was chosen. The study population consisted of 117 Community Health Agents (CHA), with the sample 87 CHA from the municipality of São Gonçalo do Amarante, Ceará having as inclusion criteria all CHA in the rural and urban area of the municipality, who agreed to participate in the research after signing the informed consent form. The exclusion criteria include all workers with less than one month of work as ACS, those who are enjoying vacation, maternity leave and sick leave. Thirty CHAs were excluded from the survey, of whom 03 were on vacation, 04 on maternity leave, 04 on health leave and 19 refused to participate in the interview. Data collection was performed through the application of a questionnaire based on the model by Cerqueira et al. (2010)⁶. The questions included questions related to identification (gender, age, marital status, monthly income, education, lifestyle) and occupational exposure. Data collection was carried out in November in all basic rural and urban Units of the Family Health Program of São Gonçalo do Amarante.

Data analysis was descriptive in order to identify the ergonomic risks in CHA. The computer program Excel version 2003 was used to organize the database and the GraphPad Prisma version 5.0 application was used as a statistical analysis tool. The data were expressed through graphs and tables for better understanding. This work followed the precepts of resolution 466/2012, all participants signed a free and informed consent form agreeing with their participation in the research, guaranteeing that the data would be used for

scientific purposes, being confidential and private, thus preserving the person involved in this research. In addition, this article is part of an umbrella project approved by the Research Ethics Committee under number CAAE 18191213.7.3001.5183.

RESULTS AND DISCUSSION

Of the study participants, 93% are female and 18.4% are between 20 and 29 years old; 34.5% are between 30 and 39 years old and 26.4% between 40 and 49 years old; and 16% are between 50 and 59 years old; 41% have an average time of 2 to 9 years of service, 38% from 10 to 19 years and 21% from 20 to 29 years. Historically there have been reports of women as caregivers since the Biblical Old Testament. In the Middle Ages, the image of women as caregivers was related to religiosity, which may have led to greater adherence to care by women⁷. In the health sector, feminization is confirmed as a registered trademark, since, in 2006, women accounted for more than 70% of the entire contingent of health work - and with a tendency to growth. The professional category of CHA also follows this pattern⁸.

Table 1. Socio-demographic data

DATA	N	%
Age range		
18	04	4,6
20-29	16	18,4
30-39	30	34,5
40-49	23	26,4
50-59	14	16,1
Marital Status		
Married	51	58,6
Single	25	29
Widowed	04	4,5
Divorced	06	6,9
Concubinage	01	1
Income		
1-2 salary	86	98,85
3-5 salary	01	1,15
Schooling		
Elementary school completed	02	2,30
complete High School	72	82,75
Incomplete High School	03	3,45
Graduated	08	9,20
Incomplete higher education	02	2,39

This fact may be closely linked to the caregiver role that women play in society, being the main responsible for the education and feeding of children and for the care provided to elderly family members⁹. It was found that 58.6% of respondents were married, 29% were single, 6.9% separated, 4.5% were widowed, while 1% lived in concubinage. 98.85% with an income of one to two minimum wages and of these according to schooling 2.30% having completed high school, 82.75% with completed high school, 3.45% with incomplete high school, 9.20% with higher education incomplete and 2.30% having completed higher education. The Ministry of Health does not require a degree of education for the role of agent, only that you know how to read and write^{10, 11}. However, the higher the level of education, the more conditions the agent will have to incorporate new knowledge and guide the families under his responsibility. Family income ranged from 1 to 2 minimum wages, placing them in the low-income class, approaching the economic situation of the assisted population. It is also evident the participation of the ACS in the family support, since in the municipality, the salary paid to the ACS corresponds to a value slightly higher than the minimum salary⁵.

Table 2. Main osteoarticular complaints by community health workers

Data	n	%
Anatomicalregionofpain		
Quadril	22	25,28
Hand	18	26,68
Pernas	43	49,4
Foot	33	37,93
Arms	22	25,28
Knee	19	21,83
Spine vertebral	68	78,16
Neck	19	4,83
Head	07	8,04
Ankle	01	1,1
Dor relacionado ao trabalho	n	%
Before	03	3,44
During	24	27,58
After	50	57,44
BeforeandAfter	07	8,04
Before, duringandafter	12	13,95
Às vezes	01	1,1
Qual sua posição de trabalho		
Standing	19	22,9
Curved	06	6,9
Seated	06	6,9
SeatedandStanding	17	19,76
Walking	10	11,6
Allthepositions	48	55,8

Table 3. Relationship between Leave and Physical Activity

Physicalactivity	Absencefromwork				X ²	Valor de P
	Yes	%	No	%		
Yes	01	1,15	08	8,9	0,35	0,551
No	15	17,24	63	72,41		

Table 4. Relationship between Removal and Osteoarticular Pain Symptoms

Absencefromwork	Pain				X ²	Valor de P
	Yes	%	No	%		
Yes	08	8,9	71	81,61	0,04	0,833
No	01	1,15	07	8,34		

Table 05. Relationship of Osteomioarticular Pain and Physical Activity

Physicalactivity	Pain				X ²	Valor de P
	Yes	%	No	%		
Yes	14	15,79	01	1,15	0,13	0,70
No	65	74,72	07	8,34		

The prevalence of musculoskeletal pain reported by the ACS's was 78.16% in the spine and 49.4% in the legs, with 57.44% of this pain related to work after the service and 27.58% during. In the analysis of the CHA's working position, a percentage of 55.8% was used in all positions and 22.9% of standing prevalence. Pain is a symptom that can interfere with the performance of daily activities, causing from limited movement to temporary disability, depending on the intensity of the pathology. The movements of the body before easy to be performed end up being hampered due to musculoskeletal symptoms. However, it is important to note that, in the work of the ACS, long walks on bumpy and tortuous streets, the use of backpacks, added to the weight of the scale for weighing children and the need to remain seated in incorrect positions during home visits, for lack of benches or chairs, they consist of factors that represent biomechanical risks and, consequently, a potential source of pain².

It was observed that there is no statistically significant difference between the practice of physical activity and absence from work, that is, in this study, the practice of physical activity does not act as a protective factor for reducing absence from work (p 0.551). However, the different individual characteristics and lifestyles make this impact varied and difficult to analyze, since the CHA profession is directly related to its own physical capacity and fitness. It was observed that there is no statistically significant difference between withdrawal and symptoms of musculoskeletal pain, that is, in this case, pain is not the main symptom for withdrawal from work (p-0.833). However, these results may be biases inherent to cross-sectional studies, since they provide only an instant overview of the situation investigated, selecting "healthy workers" in activity, to the detriment of those who, precisely because they are not "healthy", would be removed or dismissed¹⁰. In a study carried out in Brazil, researchers found that regarding the diseases reported by CHWs with a medical diagnosis, spine problems stood out with 17.07% and arterial hypertension with 14.63%. The following diseases were also mentioned: hepatitis B, epilepsy, diabetes, varicose veins, with 2.43% each. In the reports of diseases without medical diagnosis (self-reported), spinal pain, varicose veins, migraine, pain in the feet, hemorrhoids and repetitive strain injuries stand out with 2.43% each³. Workers share the disease profiles of the "general population", depending on their age, gender, social group, or insertion in a specific risk group. In addition, workers may become ill due to work-related causes, as a consequence of the profession they exercise or have exercised, or due to the adverse conditions in which their work is or was performed³.

It was observed that there is no statistically significant difference between musculoskeletal pain and the practice of physical activity and absence from work, that is, in this study, the practice of physical activity does not act as a protective factor for decreasing absence from work (p 0.70). A variable associated with impairment of the physical domain was the presence of musculoskeletal pain². Pain is a symptom that can interfere with the performance of daily activities, causing from limited movement to temporary disability, depending on the intensity of the pathology. The movements of the body before easy to be performed end up being hampered due to musculoskeletal symptoms. However, it is important to highlight that, in the work of the CHA.

Conclusion

When analyzing the present study, it was found that there is no statistically significant difference between the signs and symptoms listed above, however it was observed that the different individual characteristics and lifestyles make the relationship between withdrawal and the practice of physical activity and relationship osteomioarticular pain and physical activity is varied and difficult to be analyzed, since the CHA profession is directly related to its own physical capacity and aptitude. This study enabled a previous assessment of working conditions and the ergonomic risks to which they are exposed, in addition to a better understanding of the topic. However, it is suggested that other studies use methods that better investigate the risks of CHWs in their work process, which have a direct impact on quality of life and can lead to suffering or promote health. We conclude that it is extremely important to organize educational processes and possible inclusion of gymnastics in the workplace, which consists of exercises

performed in the workplace, acting in a preventive and therapeutic way, emphasizing the stretching and compensation of the muscular structures involved in daily occupational tasks.

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