62 - CONCEPTUAL, CLINICAL AND LEGAL ASPECTS THAT THE PHYSICAL EDUCATION PROFESSIONAL MUST KNOW ABOUT CUMMULATIVE TRAUMA DISORDERS

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Introduction

Cumulative trauma disorders (CTD) enclose clinical and pathological aspects related to muscle and skeletal systems, being able or not to unleash concomitant conditions that can involve the nervous and vascular peripheral systems. They affect any person submitted to specific work conditions, mainly when repetitive activities, incorrect position, excess of force, physical overload and an inadequate ergonomic work environment are present.

Annually, in the United States of America, about 19 million people (7% of population) are affected by cumulative trauma disorders. Of the total costs, 34.9% are spent with medical treatments and 65.1% are spent with worker indemnities. Cumulative trauma disorders cost four times more than the other illnesses that cause work absences.

The Annual Survey of Occupational Injuries and Illnesses (ASOII) produced by Bureau of Labor Statistics (BLS) showed, in 1995, that 308.000 cases (62% of occupational injuries) occurred due to disorders associated to repetitive trauma. The number of occurrences increased significantly from 23.800 in 1972, to 308.000 in 1995.

In Brazil, according to statistical data of the Ministry of Social Welfare, 393.071 cases of work-related accidents were registered in 2002, of which 22.311 were occupational illnesses and, among these, 13.302 (59.6%) were considered as pathologies related to cumulative trauma disorders. About four million Brazilian are submitted to some kind of treatment due to pain caused by incorrect position during work activities and also to daily pressures of competitive situations. Therefore, this group of pathologies is nowadays considered as epidemic.

The medical systematization of the occupational etiology of illnesses was showed for the first time in 1700 by Bernardino Ramazzini, who described in the book entitled "*Le Malattie dei Lavorati de Morbis Artificum Diatriba*" the illnesses related to more than fifty occupations and proposed that the question "What is your occupation?" was added to the classic models of anamnesis.

The diagnosis of pathologies enclosed as CTD is based on establishment of etiology correlation and adequate clinical investigation. Among the several muscle, skeletal and nervous injuries present in cumulative trauma disorders, it will be described those related to physical education professional's work activities, according to their different groups:

I) Tendons, tendosynovial and synovial pathologies: inflammatory diseases that compromise tendons and tendons sheaths. The chronic cases are, generally, associated to repetitive movements allied to force demand. Synovitis is a generic word applied to any inflammatory process that involves synovial, articular, intermuscular or peritendineum tissues at any part of the body. Tenosynovitis means the inflammatory process of synovial tissues that involves specifically tendons. In tendinitis, there is an inflammatory condition in tendons tissue, at any part of the body, with or without degeneration of its fibers.

II) Nervous pathologies (compressive neuropathies): the symptomatology depends on affected nerve, but the most common symptoms are: pain, paresthesias, force loss and alterations in sensibility mainly in upper members due to compression of nerves. In this group, it's important to know the CTS (Carpal Tunnel Syndrome), which means the compression of median nerve in the fist. It occurs during manual repetitive activities, mainly if force or carpus deviations are present.

III) Muscles pathologies: the cases described as occupational injuries are associated to activities that involves hard work conditions, spasmus, or immobilization accompanied by wrong positions and for a long time, of corporal segments such as head, neck, shoulders and dorsolumbar area, chronic tension, excessive and repetitive efforts, arms positioned above the shoulders (using force) and vibrations of the entire body. The main pathology of this group is represented by spine pain (spondylalgia), affecting cervical, dorsal and lumbar segments.

The physical education professional, due to the peculiarity of his labor activity, must be able to recognize daily situations that may lead to an ergonomic evaluation need, as well as be alert to the main signals and symptoms that predict the occurrence of different pathologies. Thus, the purpose of this study is to analyze conceptual, legal and clinical aspects of a group of pathologies of great importance, standing out the preventive actions developed by the physical education professional such as the implement of labor gymnastics programs. It was observed that there is no information about characterization of actions and inclusion of this professional in the normative contents of Brazilian current legislation on cumulative trauma disorders.

Material and Method

This is a descriptive and qualitative study, with documentary format, that used the contents analysis technique. The previous analysis of texts contents and the study of all information contained in those documents were done. The evaluation of welfare laws related to cumulative trauma disorders was performed using data from Federal Government available at <http://www.planalto.gov.br>, and also data from Dataprev/Sislex, available at <http://www.81.dataprev.gov.br/sislex>.

Results and Discussion

In current Brazilian legislation, only three documents were identified as been directly related to CTD: the first one (Governmental Decree n. 4.062/1987) recognizes the typist tenosynovitis as an occupational injury; the second (Governmental Order n. 606/98) approves technical rules for skeletal and muscles work-related disturbances; and the third document (Governmental Instruction n. 98/03) approves the technical rule for cumulative trauma disorders.

None of these rules refers to physical education professional's role in prevention of CTD. The most recent (Governmental Instruction n. 98/03) admits that a multiprofessional interaction in cumulative trauma disorders is necessary, and also reinforces the importance of several professionals' participation such as doctors, nurses, physical therapists, physiotherapists, occupational therapists, psychologists and social assistants. However, there is no reference to physical education professional, as well as the importance of labor gymnastics in preventive programs.

According to Kuorinka and Forcier (1995), the cumulative trauma disorders occurrence is multicausal and related to different risk factors such as repetitive work activities, leading to physiological and/or psychological monotony, which could be minimized if a labor gymnastics program is developed. Therefore, the importance of physical education professional's work and knowledge on occupational health is indisputable.

According to Lima (2003), the aim of labor gymnastics is to propitiate physical, physiological and psychological adaptations through exercises at work environment. Thus, activities that act direct and specifically preventing illnesses that affect laborer's muscle and nervous systems were performed. Firms, today, tend to get worried about employees' health and performance at work, consolidating the labor gymnastics as a great opportunity of job for the physical education professional.

The Federal Council of Physical Education, through the Resolution n. 073/2004, and considering that:

a) The employers and employees recognize the importance of gymnastics and leisure in occupational activities, providing reduction of work accidents and occupational illnesses;

b) The physical education professional works in companies and/or organizations, in order to provide health and better quality of life to employees;

c) The physical education professional attends to worker's health on their needs such as gymnastics practice, physical exercises, physical activities, and others;

d) The physical education professional is qualified and legally able to intervene on illnesses prevention, providing worker's health and contributing to their health quality.

Decided that:

"Planning, organizing, managing, developing, teaching and evaluating physical activities programs are prerogative of physical education professional, mainly those such as labor gymnastics and physical exercises programs, sports, recreation and leisure."

The importance of knowledge on cumulative trauma disorders and its risk factors is because the prevention and early treatment are fundamental to avoid the establishment of chronic involvement of tendon, muscle, skeletal and nervous components, in order to preserve anatomic structures, mainly the upper members, which are essential to work and sports practice, but at the same time, are intensely affected by cumulative trauma disorders.

The physical education professional, as psychologists, physiotherapists, occupational therapists, doctors and nurses, plays an important role on establishment of preventive programs related to CTD. That's because a multidiscipline team must be planned and act respecting the specificities of each professional group, but work together in order to detect, treat and prevent cumulative trauma disorders.

Conclusions and Recommendations:

Although in the last eighteen years the cumulative trauma disorders issue has been described and specifically reviewed in three legal documents of Brazilian legislation, none of them, however, determined the preventive actions that must be carried out by physical education professionals. Thus, this study is an alert and a recommendation to a mayor awareness and professional mobilization in order to revert this important mistake.

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CONCEPTUAL, CLINICAL AND LEGAL ASPECTS THAT THE PHYSICAL EDUCATION PROFESSIONAL MUST KNOW ABOUT CUMMULATIVE TRAUMA DISORDERS

Abstract

Cumulative Trauma Disorders (CTD) are, nowadays, considered epidemics and must be studied, prevented and treated by a multiprofessional group. They affect any person submitted to specific work conditions, mainly when repetitive activities, incorrect position, excess of force, physical overload and an inadequate ergonomic work environment are present, and enclose about 30 illnesses related to disturbances in tendons, joints, muscles and nerves. Among these conditions, tendinitis, tenosynovitis and bursitis are the most known. The present study aims to analyze conceptual, legal and clinical aspects of the pathologies present in cumulative trauma disorders cases, enhancing the importance of the physical education professional's preventive performance on the implement of labor gymnastics programs, and also to assess the gaps in characterization and inclusion of this professional in the normative contents of current Brazilian legislation. This is a qualitative study, with documentary format, in which was used the content analysis technique. The assessment of legal documents containing the clinical, preventive and therapeutic procedures applied to cumulative trauma disorders allowed the conclusion that in none of them the role that physical education professional must perform in the development of preventive actions related to cumulative trauma disorders is determined. Thus, there must be a mayor awareness and professional mobilization in order to revert this important mistake.

Keywords: Cumulative Trauma Disorders; Physical Education; Legislation.

ASPECTS CONCEPTUELS, CLINIQUE ET LÉGAUX QUE LE PROFESSIONNEL DE L'ÉDUCATION PHYSIQUE DOIT SAVOIR AU SUJET DE DÉSORDRES CUMULATIFS DE TRAUMA

Résumé

Les désordres cumulatifs de trauma sont de nos jours considérés comme épidémies qui doivent être étudiées, prévenu et traités par un groupe multiprofessionnel. Ils affectent toute personne soumise aux spécifiques conditions du travail, principalement quand activités répétitives, la position incorrecte, l'excès de force, la surcharge physique et un environnement du travail ergonomique inadéquat sont présents, et joint approximativement 30 maladies liées aux perturbations dans les tendons, les joints, les muscles et des nerfs. Parmi ces conditions, le tendinite, la ténosinovite et le bursite sont le plus connu. La présente étude vise à analyser des aspects conceptuels, légaux et cliniques des pathologies actuelles dans les cas des cumulatives de désordres de trauma, en rehaussant l'importance de la performance préventive du professionnel d'éducation physique sur les programmes de gymnastique de travail, et à évaluer également les lacunes dans la caractérisation et l'inclusion de ce professionnel dans le contenu normatif de la législation brésilienne courante. C'est une étude qualitative, avec le format documentaire, dans lequel a été employée la technique d'analyse du contenu. L'analyse de documents légaux qui contiennent les procédures clinique, préventives et thérapeutiques aux désordres cumulatifs de trauma a permis la conclusion que dans aucune d'elles le rôle que le professionnel d'éducation physique doit exécuter dans des actions d'empêchement a reliée à cette condition est déterminé. Ainsi, il doit y a une maire conscience et une mobilisation de professionnel afin de revenir cette erreur importante.

Mots-clés: Désordres Cumulatifs de Trauma; Éducation Physique; Législation.

ASPECTOS CONCEPTUALES, CLÍNICOS Y LEGALES QUE EL PROFESIONAL DE EDUCACIÓN FÍSICA DEBE SABER SOBRE TRASTORNOS DE TRAUMAS ACUMULADOS

Resumen

Los Trastornos de Traumas Acumulados (TTA), se consideran como epidemias que deben ser estudiadas, prevenidas y tratadas hoy en día por un grupo multiprofessional. Afectan a cualquier persona sometida a las condiciones específicas de trabajo, principalmente cuando las actividades son repetitivas, la posición es incorrecta, existe un exceso de fuerza, sobrecarga física y un ambiente inadecuado ergonómico de trabajo están presentes, e incluyen cerca de 30 enfermedades relacionadas con los disturbios en tendones, empalmes, músculos y nervios. Entre estas condiciones, la tendinitis, el tenosynovitis y la bursitis son los más conocidos. El actual estudio tiene como objetivo analizar los aspectos conceptuales, legales y clínicos de las patologías presentes en casos acumulativos de los desórdenes del trauma, realzando la importancia del funcionamiento preventivo por un profesional de educación física, ejercido atraves de programas de gimnasia laboral, y también determinar las lagunas en la caracterización y la inclusión de este profesional en contenido normativo de la legislación brasileña actual. Este es un estudio cualitativo, con el formato documental, en el cual fue utilizada la técnica del análisis del contenido. El análisis de los documentos jurídicos que contenían los procedimientos clínicos, preventivos y terapéuticos aplicados a los desórdenes acumulativos del trauma permitió la conclusión que en ningunos de ellos se determina el papel que el profesional de educación física debe realizar en acciones relacionadas con esta condición. Así mismo, debe haber un conocimiento del alcalde y una movilización del profesional para invertir este error importante.

Palabras claves: Trastornos de Traumas Acumulados; Educación Física; Legislación.

ASPECTOS CONCEITUAIS, CLÍNICOS E NORMATIVOS QUE O PROFISSIONAL DE EDUCAÇÃO FÍSICA NECESSITA SABER SOBRE LER/DORT

Resumo

As LER-DORT, Lesões por Esforços Repetitivos (LER) e os Distúrbios Osteomusculares Relacionados ao Trabalho (DORT) são, atualmente, consideradas como verdadeiras epidemias, passíveis de estudo, prevenção e tratamento por uma equipe multidisciplinar. Ocorrem em qualquer indivíduo submetido a determinadas condições de trabalho, nas quais haja, sobretudo, a existência de atividades repetitivas, postura incorreta, excesso de força, sobrecarga física e inadequação ergonômica do ambiente de trabalho, englobando cerca de 30 doenças relacionadas com alterações nos tendões, articulações, músculos e nervos, das quais a tendinite, a tenossinovite e a bursite são as mais conhecidas. O presente estudo tem como objetivo analisar aspectos conceituais, normativos e clínicos deste grupo de patologias que tem grande importância clínica, ressaltando a importância do papel preventivo do profissional de educação física, exercido através da implantação de programas de ginástica laboral e as lacunas existentes na caracterização e inclusão deste profissional nos conteúdos normativos da legislação brasileira vigente. A pesquisa tem natureza qualitativa, com formato documental, utilizando-se a técnica de análise de conteúdo. A análise dos documentos legais que normatizam os procedimentos clínicos, preventivos e terapêuticos das LER-DORT permitiu concluir que em nenhum deles está determinado o espaço que o profissional de educação física deve ocupar e exercer nas medidas preventivas das LER/DORT, o que se traduz em um alerta para que haja uma maior conscientização e mobilização profissional para reversão deste equívoco, diante da abordagem multidisciplinar que estas patologias exigem. **Palavras-Chave:** LER-DORT; Educação Física; Legislação.