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Research Article

OSTEOMUSCULARES ADHERENCE TO PHYSICAL ACTIVITY AMONG HEALTH PROFESSIONALS AND ITS MUSCULOSKELETAL REPERCUSSIONS

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ABSTRACT

Physical activity is defined as bodily movement, which allows any energy expenditure greater than resting levels. Regular practice generates gains in mental and physical health, so physically active people are more vigorous and willing to carry out their professional and daily activities, enhancing their interpersonal relationships. It is known that there is a low prevalence of healthy behaviors in relation to physical activity among health professionals. This is a literature review, added to a cross-sectional data collection through digital media with an anonymous form that does not require submission to the research ethics committee. The analysis of the data showed that 31.9% of the absolute population surveyed had some previous illness or was taking daily medication. Of these, 52.5% had psychiatric disorders, 20.7% respiratory diseases and 20.3% musculoskeletal diseases, which correlate directly with limiting factors for physical activity. The findings indicate that regular exercise is an ally in improving or maintaining various health indicators. For this reason, simple and inexpensive measures such as assessing the level of physical activity and monitoring these professionals reduces hospital absenteeism, increases personal performance and consequently improves the quality of the service provided to the population.

KEYWORDS

Physical activity; Obesity; Chronic diseases; Psychiatric disorders in health professionals and Musculoskeletal injuries.

INTRODUCTION

Physical activity is defined as bodily movement, which allows any energy expenditure greater than resting levels (Oliveira, 2011). Practicing physical activity on a regular basis generates gains in mental and physical health, so that physically active people are more vigorous and willing to carry out their professional and daily activities, have a better cognitive level and show greater energy and less tiredness, helping to boost their interpersonal relationships, family relationships and socialization at work (Macedo et al., 2003; Negrão et al., 1999).

One of the most prevalent risk factors for health problems among the world's population is a sedentary lifestyle, currently identified as a major public health problem in a wide range of sectors (Pate et al., 1995; Mezzani, Giannuzzi 2003). Physical inactivity reduces the body's physiological reserves, which poses risks to health and physical capacity. It is considered a risk factor that has a negative influence on other risk

factors, such as hypertension and obesity. As a consequence of inactivity, dynamic and static muscle strength, musculature and mobility decrease and the risk of accidents and injuries to the locomotor system increases (Bortz, 1982). Studies show that physical exercise can fulfill a preventive and therapeutic role and must be included in therapeutic health practices (Shephard, 1995).

With this in mind, it is important for health professionals in the primary health care network to guide and educate people to practice physical activity, improving and changing their behavior in relation to a healthy lifestyle and guidelines for health promotion, prevention of risks related to a sedentary lifestyle, treatment and rehabilitation of diseases in the population (Facchini, et al., 2006).

It could be argued that health professionals should maintain healthy lifestyles in order to stimulate the

practice of physical activity on a daily basis (Fuscado, 2002; Chakravarthy, et al., 2002). However, there is a low prevalence of healthy behavior in relation to physical activity among these professionals, which leads to a reduction in guidance on the subject to patients and, consequently, missed opportunities for basic indications (Oliveira, et al., 2022).

Strategies are needed to encourage health professionals to change their behavior (Siqueira et al., 2009), in addition to identifying the causal factors of sedentary lifestyles in this population, which is aware of the benefits of regular physical exercise, but does not practice it (Siqueira et al., 2009). The aim of this study is to review the literature on adherence to physical activity in health professionals and its musculoskeletal repercussions, carrying out a temporal analysis of prevalence and providing possible interventions.

METHOD

This is a literature review using the Pubmed, Lilacs and Sciencedirect databases, using the descriptors: physical activity, obesity, chronic diseases, psychological disorders in health professionals and musculoskeletal injuries. We selected 10 articles that best met the study criteria, available in Portuguese/English/French and Spanish and published between 1995 and 2022. In addition to cross-sectional data collection through digital media with an anonymous form that does not require submission to a research ethics committee (INSPIRED BY THE METHODOLOGY OF THE FAHRENHOLTZ IL ARTICLE, 2022).

RESULTS

The statistics show a high prevalence, 31.9%, of the absolute population surveyed, with some previous

illness or taking daily medication. Of these, 52.5% had psychiatric disorders, 20.7% respiratory diseases and 20.3% musculoskeletal diseases, which directly correlate with limiting factors for physical activity.

Sedentary people accounted for 48.6% and among those who practiced physical activity, 34.3% noticed movement limitations during physical and/or work activities and 63.1% had not sought medical attention and had previous diagnoses of neurological and/or musculoskeletal injuries associated with physical activity, totaling 21.1%.

As a result, 89.7% consider their work routine to be stressful; 84.9% feel anxious; 66.5% feel unwell on a daily basis and 44.3% have changes in their sleep-wake cycle pattern, which has an abrupt impact on their quality of life.

In addition, 33.5% consider their diet to be unhealthy and of these 22.7% do not follow up their nutrition; 59.6% use creatine supplementation, 55% whey, 10.1% pre-workout and 21% caffeine, without any follow-up or prescription. Among the health professionals, 5.4% have used or are using anabolic steroids and 14.5% are not being monitored by a doctor, representing a greater risk of exposure to the drastic side effects of using a substance with a controlled prescription.

It was reported that 89.3% of the group who were sedentary, or who had previously practiced physical activity irregularly, felt an improvement in their daily mood after starting to do so. Of the population who took part in the survey, 65.5% were doctors/medical students, while 12.4% of the general population did not practice physical activity even though they knew it was necessary. And 36.4% practiced without professional supervision.

DISCUSSION

Musculoskeletal injuries associated with work can lead to various consequences such as chronic pain, joint instability and physical motor sequelae. Thus, pain symptoms in the feet, legs, hands, arms and joints are present, as well as lumbosciatalgia, tendonitis, herniated discs, carpal tunnel syndrome and muscle fatigue. As a result, there is a reduction in productivity, an increase in absenteeism and difficulties in carrying out daily activities. In this sense, there is an impact on the affected individual's quality of life and inability to return to the workplace (Lelis et al., 2012; Barbosa et al., 2007).

Many health professionals are susceptible to work-related injuries due to the high workload and inappropriate body positions during working hours. For example, some studies indicate that 96.3% of nurses in the survey reported musculoskeletal pain within 12 months (Lelis et al., 2012), while another study shows that 65.67% of dental surgeons report musculoskeletal injuries (Regis et al., 2006). The impact on the quality of life of these professionals leads them to seek exhaustive treatment in order to recover from the injuries and reduce the pain. The use of daily medication, such as anti-inflammatory drugs, is routine and not always resolute (Barbosa et al., 2007).

Repetitive strain injuries (RSI), also known as work-related musculoskeletal disorders (WMSDs), are diseases and injuries of an occupational nature and are considered to be multifactorial phenomena, which are related to organizational, biomechanical and psychosocial causes (Lelis et al., 2012). They are commonly seen in workers of different ages, genders and professions, and are therefore multidimensional, with a higher prevalence in females, due to the double working day (Barbosa et al., 2007).

This pathology is directly associated with the individual's profession and the working conditions

imposed on workers, such as a high workload, inadequate body position, greater demand on the musculoskeletal system and environmental disorganization. WMSD is characterized by involvement of the synovium, muscles, tendons, nerves, fascia, bones and ligaments, and can be presented in isolation or together. In addition, studies indicate that the shoulder (39.40%), wrist (18.30%) and neck (17.20%) are the most affected regions (Regis et al., 2006; Lelis et al., 2012; Barbosa et al., 2007).

It is worth noting how stressful, painful and unhealthy the hospital environment can be, and how exhausting it can be to care for the sick and deal with the suffering of others (Neto et al., 2013). In addition to the heavy workload, multiple jobs and low pay can lead to professionals becoming ill, an increased risk of accidents at work and a lower quality of life (Lima et al., 2001). In this way, encouraging hospitals to exercise, with programs that stimulate sports practice, can be a fundamental point in promoting health and maintaining the quality of life of their employees (Neto et al., 2013).

Oler et al., 2005 studied nurses in the operating room of a teaching hospital and reported that their quality of life was compromised and that the sphere most affected was pain, followed by vitality, social aspect and with equal frequency mental health and physical aspect. The authors justify these results by the physical and mental strain that this population is subjected to on a daily basis in their work routine. Reinforcing these findings, other studies (Siqueira, Siqueira and Gonçalves, 2006; Páscoa et al., 2007; Fogaça, et al., 2010) have also observed a reduction in the quality of life of doctors and nurses working in various hospital sectors.

According to Tamayo (Tamayo, 2001), the level of stress in professionals who do not include regular

physical activity in their routine is higher than in their peers who do. With regard to physical exercise, people with this habit show greater willingness and energy to carry out their routine work activities (Macedo et al., 2003).

These findings indicate that regular physical activity can be a great ally in improving or maintaining various health indicators (Siqueira et al., 2009; Silva et al., 2010). Positive results have been observed in the literature, showing that the inclusion of physical activity practices in the workplace makes an important contribution to improving health domains and perceived quality of life (Grande et al., 2013). In view of this, simple and inexpensive measures such as assessing the level of physical activity and monitoring these professionals can predict future health problems, reducing hospital absenteeism, increasing personal performance and consequently improving the quality of the service provided to the population (Neto et al., 2013).

CONCLUSION

It was concluded that health professionals are exposed to long working hours, sleep deprivation, multiple employment relationships, low pay, insecurity, physical fatigue and lack of ergonomics, which have direct implications for quality of life, resulting in increased rates of depression, anxiety, stress, burnout syndrome, alcoholism, smoking and fatigue. It has been shown that professionals who practice regular physical activity have better performance in their work activities, more energy and better relationships with the team, affirming how adherence to this habit is an ally in the quest to maintain and improve numerous health indicators, making an important contribution to improving health domains and the perception of quality of life. It is therefore important that health professionals adopt physical activity as a regular

practice, not only for physical and aesthetic reasons, but also for their mental well-being and to help them in their work activities.

REFERENCES

1. Barbosa, M. D. S. A., Santos, R. M. D., & Trezza, M. C. S. F. (2007). A vida do trabalhador antes e após a Lesão por Esforço Repetitivo (LER) e Doença Osteomuscular Relacionada ao Trabalho (DORT). *Revista Brasileira de Enfermagem*, 60, 491-496.
2. Bortz, W. M. Disease and aging. *JAMA* 1982. Disponível em: v, 248, n. 10, p. 1203-1208, 1982. Acesso em: 15 set. 2020.
3. Chakravarthy, M. V., Joyner, M. J., & Booth, F. W. (2002, February). An obligation for primary care physicians to prescribe physical activity to sedentary patients to reduce the risk of chronic health conditions. In *Mayo clinic proceedings* (Vol. 77, No. 2, pp. 165-173). Elsevier.
4. Facchini, L. A., Piccini, R. X., Tomasi, E., Thumé, E., Silveira, D. S., Siqueira, F. V., & Rodrigues, M. A. (2006). Desempenho do PSF no Sul e no Nordeste do Brasil: avaliação institucional e epidemiológica da Atenção Básica à Saúde. *Ciência & Saúde Coletiva*, 11, 669-681.
5. Fogaça, M. D. C., Carvalho, W. B. D., & Nogueira-Martins, L. A. (2010). Estudo preliminar sobre a qualidade de vida de médicos e enfermeiros intensivistas pediátricos e neonatais. *Revista da Escola de Enfermagem da USP*, 44, 708-712.
6. Fuscaldo JM. Prescribing physical activity in primary care. 2002. *W V Med J* ; 98:250-3.
7. Grande, A. J., Silva, V., Manzatto, L., Rocha, T. B. X., Martins, G. C., & Vilela Junior, G. D. B. (2013). Comparação de intervenções de promoção à saúde do trabalhador: ensaio clínico controlado randomizado por cluster. *Revista Brasileira de*

- Cineantropometria & Desempenho Humano, 15, 27-37.
8. Lelis, C. M., Battaues, M. R. B., Freitas, F. C. T. D., Rocha, F. L. R., Marziale, M. H. P., & Robazzi, M. L. D. C. C. (2012). Distúrbios osteomusculares relacionados ao trabalho em profissionais de enfermagem: revisão integrativa da literatura. *Acta paulista de enfermagem*, 25, 477-482.
 9. Lima Júnior, J. H. V., & Ésther, A. B. (2001). Transições, prazer e dor no trabalho de enfermagem. *Revista de Administração de Empresas*, 41, 20-30.
 10. Macedo, C. D. S. G., Garavello, J. J., Oku, E. C., Miyagusuku, F. H., Agnoll, P. D., & Nocetti, P. M. (2003). Benefícios do exercício físico para a qualidade de vida. *Revista Brasileira de Atividade Física & Saúde*, 8(2), 19-27.
 11. Mezzani, A., & Giannuzzi, P. (2003). Physical activity for cardiovascular disease prevention. *ITALIAN HEART JOURNAL*, 4, 739-744.
 12. Negrão, C. E., Tinucci, T., & Rondon, M. U. P. B. (1999). Estratégias para mudanças de hábitos de vida-Exercício físico. *Cardio Sintética*, 12, 13-15.
 13. Neto, A. A., Araújo, R., Pitangui, A., Menezes, L., França, E., Costa, E., ... & Junior, M. C. (2013). Qualidade de vida e nível de atividade física de profissionais de saúde de unidades de terapia intensiva. *Revista Brasileira de Atividade Física & Saúde*, 18(6), 711-711.
 14. Oler, F. G., Jesus, A. F. D., Barboza, D. B., & Domingos, N. A. M. (2005). Qualidade de vida da equipe de enfermagem do centro cirúrgico. *Arq ciênc saúde*, 12(2), 102-10.
 15. Oliveira, F. A. (2011). Os benefícios da atividade física no envelhecimento-uma revisão literária. *Educação Física em Revista*, 5(1).
 16. Oliveira, M. R., de Abreu, L. A., Silveira, L. C., & de Sousa Corrêa, K. (2022). Nível de atividade física de fisioterapeutas de um hospital público. *Arquivos de Ciências da Saúde da UNIPAR*, 26(2).
 17. Pate, R. R., Pratt, M., Blair, S. N., Haskell, W. L., Macera, C. A., Bouchard, C., ... & Wilmore, J. H. (1995). Physical activity and public health: a recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. *Jama*, 273(5), 402-407.
 18. Paschoa, S., Zanei, S. S. V., & Whitaker, I. Y. (2007). Qualidade de vida dos trabalhadores de enfermagem de unidades de terapia intensiva. *Acta Paulista de Enfermagem*, 20, 305-310.
 19. Regis Filho, G. I., Michels, G., & Sell, I. (2006). Lesões por esforços repetitivos/distúrbios osteomusculares relacionados ao trabalho em cirurgiões-dentistas. *Revista Brasileira de Epidemiologia*, 9(3), 346-359.
 20. Silva, R. S., Silva, I. D., Silva, R. A. D., Souza, L., & Tomasi, E. (2010). Atividade física e qualidade de vida. *Ciência & saúde coletiva*, 15, 115-120.
 21. Siqueira, F. C. V., Nahas, M. V., Facchini, L. A., Piccini, R. X., Tomasi, E., Thumé, E., ... & Hallal, P. C. (2009). Atividade física em profissionais de saúde do Sul e Nordeste do Brasil. *Cadernos de Saúde Pública*, 25, 1917-1928.
 22. Siqueira Júnior AC, Siqueira FPC, Gonçalves BGOOG. (2006). O trabalho noturno e a qualidade de vida dos profissionais de enfermagem. *REME Rev Min Enferm* ; 10(1):41-45.
 23. Shephard, R. J. (1995). Physical activity, fitness, and health: The current consensus. *Quest*, 47(3), 288-303.
 24. Tamayo, A. (2001). Prioridades axiológicas, atividade física e estresse ocupacional. *Revista de Administração Contemporânea*, 5, 127-147.