



RESEARCH ARTICLE

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CONTINUED TRAINING, QUALITY OF LIFE AND PREVALENCE OF OSTEOMUSCULAR SYMPTOMS IN TEACHERS OF BASIC EDUCATION

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ABSTRACT

The purpose of this descriptive, quantitative and cross - sectional study is to compare the scores of Osteomuscular Disturbances (DM) presented by 48 Basic Education teachers who participate in a continuing education program with previous studies. The data were collected through the application of the Nordic Osteomuscular Symptom Questionnaire (QNSO). While in the previous surveys between 48% and 93% of the teachers presented the DM, in the current study 26% expressed the problem, evidencing the relevance of a continuous education guided by a conception articulated to the needs of the context of action and the valorization of the professional protagonism.

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INTRODUCTION

The concept of quality of life in teaching in today's world implies a multi and interdisciplinary set of mutually interrelated factors as a whole. This implies the evaluation and satisfaction of the teacher and the subjects that are formed. There is no single theory that globalizes and defines the quality of life, the truth is that we can contextualize and multiply it. On the other side, this set of factors, at two levels, one referring to the material and the other to the subjective component (Vera, Bautista, De la Fuente, Velasco, 2015).

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The first refers to what the teacher has to know about his professional, has the material, pedagogical and material resources that satisfy the subject as a person and professional. On the other hand, in the subjective or physical, it refers to the evaluation of the subject in relation to it as well. Linked to these two groups of factors, we find other dimensions, such as cultural, contextual, the health of the individual and their ability to relate to the environment, society and profession (Reyes, 2017). Regarding the quality of life of education professionals, Musculoskeletal Disorders (DM) are highlighted among diseases related to teaching work (Cardoso, Araujo, Carvalho, Oliveira, Reis, 2011). Due to different causes, DM decrease productivity and increase the economic costs caused by health care leave, which may lead to functional

incapacitation and even to the definite impediment of the work activity (Solis-Soto, Schon, Solis-Soto, Parra, Radon, 2017). Among the workers with a high prevalence of DM are teachers (Ceballos, Santos, 2015). Causal factors that stand out for the high prevalence of DM in these professionals include prolonged standing time in the classroom and repetitive writing on the board and uncomfortable postures. Also included in this scenario are class preparation and corrections of student tasks, psychosocial factors, which include high demand and work overload, low social support and low job satisfaction (Converso, Viotti, Sottimano, Cascio, Guidetti, 2018). Performing interventions to mitigate or prevent the onset of DM are indispensable. They can be developed during the initial formation to act in Basic Education, as in the process of continuous formation. Examples are initiatives that overcome pedagogical practices centered on traditional teaching paradigms, stimulated by formative moments that offer alternatives to meet the real needs of teachers in their contexts of action, emphasizing the work done routinely as inspiration for their continuing education (Lüdke, Going, 2018). This article confronts results of a research that counted on the participation of 48 teachers of Basic Education who attended a program of continuous formation to the results of previous researches, realized in different contexts with Brazilian territory. By working from a more transdisciplinary and ecoforming perspective, articulating theory and practice and stimulating the approximation of content to reality, in addition to using an innovative methodology and valuing protagonism, it is hoped that the training program can increase the quality of life of the teachers (Zwierewicz, Somariva, Bianco, Debiasi, Cachoeira, Silva et al., 2016). Considering that its objective is to assess the manifestation of DM in Basic Education teachers who participate in the formative proposal, the relevance of the study consists of the possibilities that the results offer for the decision making in order to re-signify the formative program and / or to strengthen it to extend the benefits verified.

MATERIAL AND METHODS

In carrying out the study, a descriptive, quantitative and cross-sectional study was prioritized. The study was divided in two stages: in the first one, a survey of the prevalence of DM was carried out in teachers who participate in the Training Program-Action in Creative Schools; in the second, the data were confronted with results of previous studies carried out in the Brazilian territory. To evaluate the musculoskeletal symptoms, the Nordic Osteomuscular Symptoms Questionnaire (QNSO), composed of a human figure divided into nine anatomical regions, was adapted culturally to the Portuguese language by Barros and Alexandre (2003). The respondent should report the occurrence of symptoms considering both the 12 months and 7 days preceding the interview, in addition to the occurrence of withdrawal from routine activities in the last year (Pinheiro, Tróccoli, Carvalho, 2002). The study involved teachers who work in Early Childhood Education and Elementary Education, linked to the municipal teaching networks of Paulo Lopes and São Ludgero, State of Santa Catarina, Brazil. The general number of teachers working in both municipalities is 119 in the first and 61 in the second. The population, however, was formed by 142 professionals who participated in formative meetings coordinated by the same professional. Of these, 48 professionals formed the study sample.

Teachers were selected by random simple probabilistic sampling and the questionnaire was applied during the formative meetings. Regarding ethical procedures, all study participants signed the Free and Informed Consent Term (TCLE), guaranteeing, among other rights, that of giving up or interrupting participation in the research at the moment they wish and that the individual results will be kept confidential. The following criteria and inclusion were adopted: teachers who attended training meetings coordinated by the same professional; the teachers who attended more than 80% of the formative stages. As exclusion criteria were adopted: those who completed the data, but did not sign the ICF; those who did not answer part of the questions. Eight teachers were discarded, resulting in a sample of 48 professionals, and all analyzes were performed in the Statistical Package for Social Sciences (SPSS), version 25.0. SPSS 27.0.

RESULTS AND DISCUSSION

With respect to the musculoskeletal symptoms presented in Table 2, 26% of the teachers linked to the Training Program in Creative Schools presented musculoskeletal problems in the last 12 months, with the lowest prevalence being the lower back (43.8%), shoulders (33.3%) and wrists / hands (31.3%). It was also observed that in the seven days preceding the questionnaire, 10.6% of the teachers presented some type of musculoskeletal symptom, while 7.1% of the total was removed in the last 12 months from daily activities due to musculoskeletal problems. The results of the current study were compared to eight previous studies. All of the eight studies involved Basic Education teachers: a) the first research investigated 298 teachers of Early Childhood Education and Elementary School of the city of Caçador (SC), and 48% presented symptoms in the 12 months prior to the study (Rocha, Prado Filho, Silva, Boscari, Amer, Almeida, 2017); b) the second research investigated teachers who participated in the pedagogical week of the Federal University of Paraná (UFPR) in 2008, and found that of the 129 teachers, 51.5% presented symptoms in the last 12 months (Magno, Carilho, Drabovski, Jucoski, Garcia, Gomes, 2012); c) the third study investigated 4,496 teachers of the Municipal Network of Salvador (BA), of whom 55% presented the symptoms (Cardoso, Ribeiro, Araújo, Carvalho, Reis, 2009); d) the fourth research investigated 61 teachers from four secondary schools in Ceilândia (DF), of which 60.5% presented symptoms (Calixto, Garcia, Rodriguez, Almeida, 2015); e) the fifth research investigated 525 teachers of Early Childhood Education and Elementary School of the Municipal Teaching Network of Jaboatão dos Guararapes (PE), finding that 73.5% presented the symptoms (Ceballos, Santos, 2015); f) the sixth research investigated 320 teachers of the Municipal Teaching Network of Pelotas (RS), and of these 89.7% presented the symptoms (Branco, Silva, Jansen, Giusti, 2011); g) the seventh research investigated 157 teachers from state and municipal schools of a city in the interior of São Paulo, of which 90.4% presented symptoms (Carvalho, Alexandre, 2006); h) the eighth survey investigated that 93% of the 242 teachers of the Municipal Teaching Network of Natal (RN) presented the symptoms (Fernandes, Rocha, Fagundes, 2011). The comparison of the DM indexes obtained by the teachers participating in the Training Program in Creative Schools in relation to these eight studies shows that, in the professionals related to the training proposal, the prevalence is significantly lower. While the results of the study involving professionals participating in the program indicated that 26% had symptoms

in the 12 months preceding the application of the questionnaire, in the other studies the proportion was 48% to 93%. It was also observed that the previous study of lower DMXXI index, has a variation of 22% in relation to the current study, while the difference reaches 67% in relation to the study that presented the highest indexes (Fernandes, Rocha, Fagundes, 2011).

Final considerations

Although it is not possible to reach conclusions about the interference of the Training-Action Program in Creative Schools in the minimization of DM in teachers of Early Childhood Education and Elementary Education, because it is not an experimental study, it is considered appropriate to highlight some conditions involved in the training program.

The two concepts strengthen a more contextualized teaching, stimulating the approximation of the school curriculum to the reality of students and the environments in which schools are inserted (Silva, 2013). In this way, pedagogical practice approaches the field of professional activity, increasing the pertinence of teaching and the possibilities to overcome classes centered on textbooks and the restricted reproduction of contents. During the formative stages actions are organized to enhance the role of teachers. In addition to socializing the innovations it promotes, each teacher has access to the initiatives of his peers, a condition that favors the transformation of the meetings in moments of diffusion of individual and collective creative capacity. In this context, the training program focused on transdisciplinarity and eco-formation could alleviate the physical and mental suffering of teachers caused by the work environment. Favoring working conditions that improve professional ethics, autonomy, community, social support, articulation between research and work, group dialogues and appreciation of everyday knowledge, are important measures to promote health in teachers (Cortez, Souza, Amaral, Silva, 2017).

REFERENCES

Barros ENC, Alexandre NMC. 2003. Cross-cultural adaptation of the Nordic musculoskeletal questionnaire. *Int Nurs Rev.* 50; (2): 101-8.

Calixto MF, Garcia PA, Rodriguez DS, Almeida PHTQ. Prevalence of musculoskeletal symptoms and their relationship with occupational performance among public high school teachers. *Cad. Ter. Ocup.* 23; (3): 533-542.

Cardoso JP, Araujo TM, Carvalho FM, Oliveira NF, Reis EJ. 2011. Psychosocial aspects of work and musculoskeletal pain in teachers. *Cadernos de Saúde Pública.* 27; (8): 1498-1506.

Cardoso JP, Ribeiro IQB, Araújo TM, Carvalho FM, Reis, EJFB. 2009. Prevalence of musculBT pain, skeletal pain in teachers. *Rev Bras Epidemiol.* 12; (4): 604-614.

Carvalho, AJFP, Alexandre NMC. 2006. Musculoskeletal symptoms in elementary school teachers. *See Bras Fisiot.* 10; (1): 35-41.

Ceballos AGC, Santos GB. 2015. Factors associated with musculoskeletal pain in teachers: sociodemographic aspects, general health and well-being at work. *Rev Bras Epidemiol.* 18; (3): 702-715.

Ceballos AGC, Santos GB. 2015. Factors associated with musculoskeletal pain in teachers: sociodemographic aspects, general health and well-being at work. *RevBrasEpidemiol.* 18; (3): 702-715.

Converso D, Viotti S, Sottimano I, Cascio V, Guidetti G. 2018. Musculoskeletal disorders among preschool teachers: analyzing the relationships among relational demands, work meaning, and intention to leave the job. 19; (1): 156.

Cortez PA, Souza MVR, Amaral LO, Silva LCA. 2017. Teaching health at work: notes from the recent literature. *CadernosColetiva Health.* 25; (1): 113-122.

Fernandes MH, Rocha VM, Fagundes AAR. 2011. Impact of musculoskeletal symptomatology on the quality of life of teachers. *Rev Bras Epidemiol.* 14; (2): 276-84.

Fernandes MH, Rocha VM, Fagundes AAR. 2011. Impact of musculoskeletal symptomatology on the quality of life of teachers. *Rev Bras Epidemiol.* 14; (2): 276-84.

Lüdke M, Going LAB. 2018. From work to teacher training. *Research Notebooks.* 42; (146): 428-451.

Magno MSM, Carillo MK, Drabovski B, Jouscoski E. Garcia MC, Gomes, AR. 2012. Analysis of the musculoskeletal symptoms of primary school teachers in Matinhos (PR). *Fisioter Mov.* 25; (4): 785-94.

Pinheiro FA, Tróccoli BT, Carvalho CV. 2002. Validation of the Nordic Osteomuscular Symptoms Questionnaire as a measure of morbidity. *Rev SaúdePública.* 36 (3): 307-312.

Reyes P, 2017. Satisfaction with life and quality of work life in teachers of state educational institutions in Metropolitan Lima. 20; (1): 119-134.

Rocha RER, Prado Filho K, Silva FN, Boscari M, Amer SAK, Almeida DC. 2017. Musculoskeletal symptoms and stress do not alter the quality of life of primary school teachers. *FisioterPesqui.* 24; (3): 259-266.

Silva VLS. 2013. Transdisciplinarity in initial teacher training. *Dynamis Magazine.* 19; (2): 20-34.

Solis-Soto MT, Schon A, Solis-Soto A, Parra M, Radon K. 2017. Prevalence of musculoskeletal disorders among school teachers in urban and rural areas in Chuquisaca, Bolivia: a cross-sectional study. *BMC musculoskeletal disorders.* 18; (1): 425.

Vera J, Bautista J, De la Fuente, H, and Velasco, F. 2015. Quality of life in normal teachers in Nuevo León, Mexico. *Psychology from the Caribbean.* University of the North. 32; (2): 213-217.

White JC, Silva FG, Jansen K, Giusti PH. 2011. Prevalence of musculoskeletal symptoms in teachers of public and private elementary schools. *Fisioter Mov.* 24; (2): 307-314.

Zwierewicz M, Somariva JF, Bianco M, Debiasi M, Cachoeira RD, Silva MC et al. 2016. Creative Schools: transformative experiences enhanced in the interaction of Higher Education with Basic Education. *Polyphony.* 27; (1): 393-414.
