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EFFECTS OF THE GROUND PILATES METHOD ON THE QUALITY OF LIFE AND PAIN LEVEL CONTROL IN ELDERLY AGE INDIVIDUALS

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Abstract: Aging comprises structural, functional, social and psychological transformations. The aim of the study was to verify the effects of the Pilates Method on the ground on quality of life and pain control in old age. It was a case study with a quantitative and qualitative approach with two elderly women. The SF-36 Quality of Life Questionnaire and the Pain Visual Analogue Scale (VAS) were applied. The results showed progress in most domains of the SF-36 Questionnaire, except for patient B who did not show any difference in terms of emotional and social aspects. Regarding the (EVA) both samples obtained satisfactory results. This way, the effects of the Pilates Method on quality of life and pain relief in elderly individuals were verified.
Keywords: Pilates Method; Quality of life; posture.

INTRODUCTION

Aging is a natural process, however, progressive and irreversible, characterized by morphological, physiological and psychological changes, these changes can cause the detriment of the human capacity to adapt to the environment and negatively affect the quality of life of the elderly (NASCIMENTO; LIMA, 2013). The more active the elderly are, the greater the chance of prolonging these harmful effects of aging (ARAÚJO, 2014). Pain is an unpleasant, individual and subjective process that involves not only the sensory aspect, but also the psychological aspect (GRILO, 2012). The Pilates Method exercises performed on the ground are ideal for the elderly, they are performed in the lying position, generating less impact on the joints, cartilages and ligaments (SACCO et al., 2005). The Pilates Method created by the German Joseph Hubertus Pilates in the 1920s consists of six key principles: centering, concentration, control, precision, breathing and flow. It favors a new postural perception, mobility, balance, muscle toning, gain of flexibility and elasticity (CURI, 2009). Quality of life corresponds to the degree of satisfaction of the individual about his momentary state of life, in the case of the elderly population, the adoption of a healthy lifestyle affects important measures for maintaining the quality of life (NASCIMENTO; CARVALHO, 2016). The study was elaborated by believing in the benefits that the Pilates Method could provide to the elderly, since the use of the Method in physical activity programs is being indicated more and more and the elderly population is becoming aware of the importance of seeking physical activity to health and well-being. Thus, the objective of this study was to verify the effects of the Pilates Method on the ground in improving the quality of life and controlling the level of pain in elderly individuals.

MATERIAL AND METHODS

A case study was carried out with a quantitative and qualitative approach proposing an exploratory objective, with two female samples, submitted to 12 sessions of Pilates Method exercises applied on the ground, three times a week, lasting 50 minutes totaling a period of four weeks. The study was carried out at the Community Support Center - NAC in Palmas-TO from October to November of 2016. Before carrying out the research, it was submitted to the Research Ethics Committee at the '' Centro Universitário Luterano de Palmas '- CEUP /ULBRA and approved under protocol nº 1.276.884/2016 and subsequently forwarded an authorization request to the coordinator responsible for the Physical Therapy sector of the Community Support Center. The samples were informed about how the research would be carried out, after agreeing

to participate and meeting the inclusion criteria, they signed the Free and Informed Consent Term – TCLE, in accordance with Resolution 466/12 of the National Health Council (CNS). To develop the research, the physiotherapeutic evaluation form was used, the Brazilian version of the quality of life questionnaire - SF -36, equipment specific to pilates on the ground: theraband, Swiss ball and sticks. Devices to measure vital signs: stethoscope and sphygmomanometer and Visual Analog Scale – VAS. In addition, the study was reinforced by research in scientific articles, dissertations, and theses.

RESULTS AND DISCUSSION

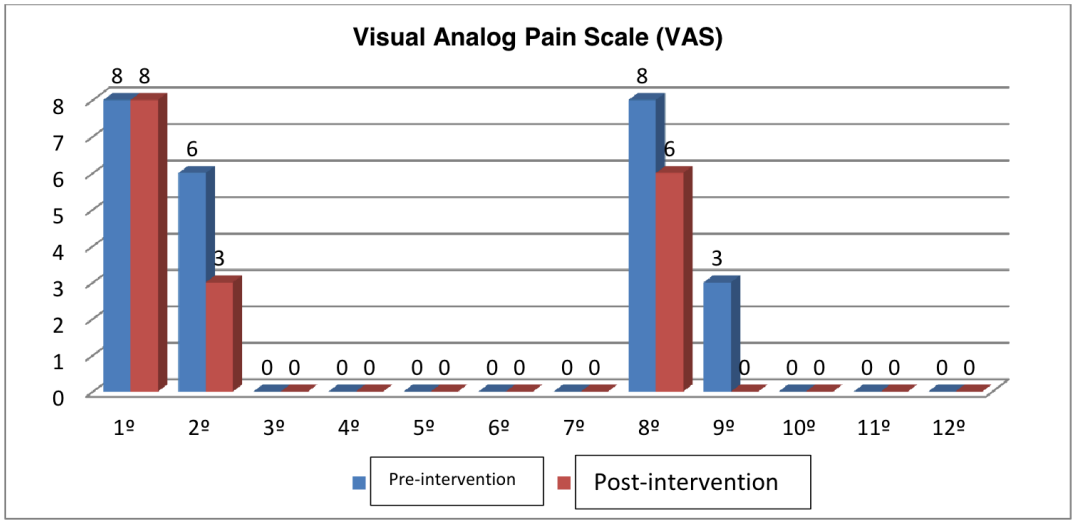
From the parameters described in the methods, a case study was described. The final sample of the study consisted of two elderly women, patient A – 72 years old, female, married, retired, with higher education, reporting low back pain as their main complaint. Patient B – 66 years old, female, divorced, maid, incomplete elementary school, her main complaint was knee pain, she had a diagnosis of osteoarthritis. The SF-36 Quality of Life Questionnaire comprises 11 questions grouped into eight domains. Values range from 0 (zero) the worst score to 100 (one hundred) the best score for each domain, this was used to compare quality of life at the beginning and end of treatment. Through the data obtained (table 1) it is observed that patient A presented progress in all domains when compared before and after. Patient B showed progress, however, in relation to the social aspects domain, the data indicate that this patient's quality of life was already good even before practicing Pilates, and this reveals that the Method was also efficient in matching these domains, as well as the domain limitation due to emotional aspects did not change, but it did not worsen the situation either. None of the domains worsened when compared pre-assessment and post-assessment. Taking into account the domains that had the highest scores when comparing the before and after, in patient A the domain with the highest score was the domain limitation due to physical aspects, with 25 before and 100 after. the pain domain, with 42 before and 94 after. It can be seen that patient A had a better evolution than before, when compared to patient B, as she already had a reasonable quality of life, despite this, it is still possible to observe a small evolution. In general, it is possible to consider that in all domains there were improvements, except for limitations due to emotional aspects and social aspects of patient B, which did not improve.

In view of the patients' main complaint, the Visual Analog Pain Scale - VAS was used daily before and after the intervention during the 12 sessions, to analyze the effect of the Pilates Method on specific pain (graphs 1 and 2). The (VAS) consists of helping to measure the intensity of pain, it is an important instrument to check daily the evolution of the patient in a given treatment, its intensity varies from 0 (zero) no pain complaint to 10 (ten) worst possible pain.

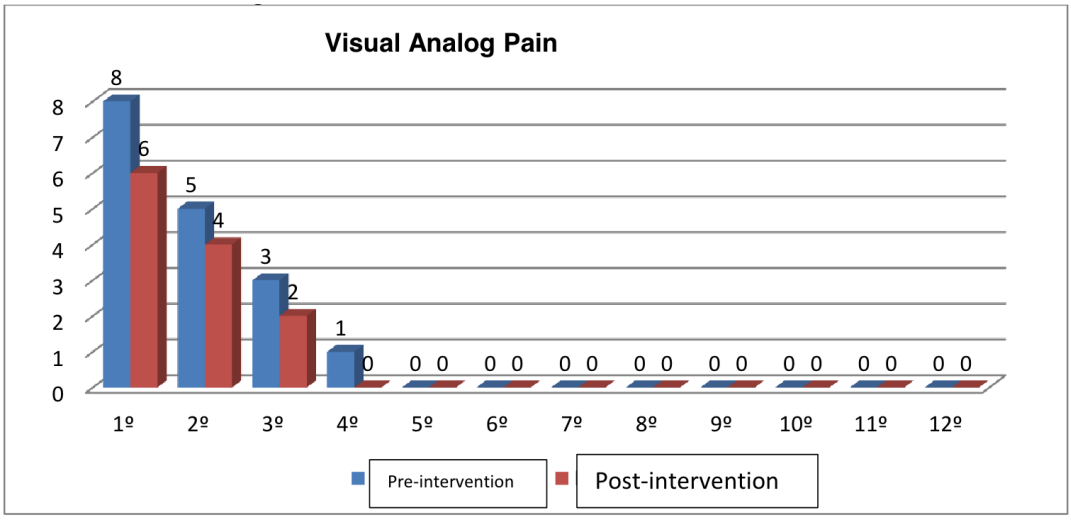
Through graphs (1) and (2) it is observed that patient A whose main complaint was low back pain, it was possible to observe that the pain is decreasing, and from the 3rd session the pain intensity was zero, however, in the 8th session patient arrived with pain eight, according to her, having moved an object in her residence, was the reason for the pain to have increased d6YUo, after performing the exercises of the Pilates Method, in the same session the intensity of the pain decreased. Patient B, who in turn, reported pain in the knee as a result of osteoarthritis, it was possible to notice that the intensity of the pain is also decreasing, and from the 4th session the pain was zero. A study carried

	PATIENT A		PATIENT B	
DOMAINS	Start of treatment	end of treatment	Start of treatment	end of treatment
Functional capacity	50	70	60	70
Limitation by physical aspects	25	100	50	75
Pain	20	74	42	94
general state of health	72	77	67	77
Vitality	35	65	75	85
Social aspects	50	87.5	100	100
Limitation by emotional aspects	50	66.6	66.6	66.6
Mental health	44	84	80	100

Table 1 – Result of the pre-assessment and post-assessment comparison of the SF-36 Quality of Life Questionnaire, in their respective domains.



Graph 1 – Daily analysis of pain through the Visual Analog Pain Scale (VAS) pre and post intervention of the Pilates Method in (patient A) – low back pain.



Graph 2 – Daily pain analysis using the Visual Analog Pain Scale (VAS) before and after the Pilates Method intervention in (patient B) – knee osteoarthritis.

out with elderly women, with the objective of evaluating flexibility, quality of life and pain, using the SF-36 questionnaire and the Visual Analog Pain Scale, as well as in the current study, in the field of limitation due to physical aspects, there was a significant improvement and in regarding pain, there was a decrease in intensity after training with the Pilates Method (TOZIM et al., 2014). Another study with elderly people, most of whom were female, 63%, in a period of one month using the SF-36 Quality of Life Questionnaire, obtained significant results in the field of limitations due to physical aspects, also confirming the results of this study (ARAÚJO, 2014). Similar to the study with the elderly, evaluating the quality of life pre and post-intervention and obtained positive results in terms of limitations due to physical aspects. In this research, one of the samples reported lumbar pain as the main complaint (POZZA et al., 2007). A survey, with the objective of evaluating the impact of the Pilates Method on the Quality of Life of its practitioners using the SF-36 questionnaire, found an evolution in the Quality of life of these patients with low back pain after practicing the Pilates Method, as well as in the current study (BERTOLDI; TESSER; DAMACENO, 2016). Osteoarthritis is a degenerative joint disease and is the main cause of joint pain in the elderly. In a study with an elderly woman with a clinical diagnosis of knee osteoarthritis, it is shown that joint movement helps in the secretion of synovial fluid, which has the function of lubricating the synovial joints, providing the elderly with a better quality of life (RIBEIRO et al., 2010). A study with an elderly person with low back pain using Pilates applied to the ground improved their quality of life, thus proving the effectiveness of this study (WINTER, 2015). It is important for the elderly to perform low-impact physical exercises on the joints, Pilates exercises are mostly performed in the lying position, with a decrease in the impact on the joints that support the body in the orthostatic position and, mainly, on the spine vertebral column (CONCEIÇÃO; MERGENER, 2012).

CONCLUSION

Through this study, it was possible to verify the effect of the Pilates Method on the quality of life and control of the level of pain in elderly individuals. Pilates in old age, therefore, it is suggested that new practical studies be carried out, with a number of larger samples and application time longer than one month.

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