

Spa Therapy as a Way of Improvement of the Quality of Life for People with Muscellaneous Problems



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SUMMARY: This research focused on the study of the effect of spa therapy on improving the quality of life, in particular in terms of the areas of physical functionality, psychological functionality, as well as sociality, in people who have problems with the spine (lumbar spine). The dysfunction of people due to their musculoskeletal problems and the ways to deal with them is a challenge for physical therapy. Method: The sample consisted of people with musculoskeletal problems, who were recipients of spa therapy services. Questionnaires were used that record the functionality of individuals in relation to the musculoskeletal problem they face, in this case, the lumbar spine. Results: From the study of the completed questionnaires, information was obtained on gender, age, occupation, health problems and the reasons that prompted the sample to use spa treatments, and the frequency of visits to spa towns. There are clear indications that the use of thermal water with a frequency of at least ten visits per year, favors people with lumbar problems. There is an improvement in mobility (better functionality in the spine), but also in the bathers' quality of life as they perceive a reduction in pain, reduced irritability, and a better mental mood. The professional action of the physical education scientist can play a decisive role in maximizing the effectiveness of the intervention through spa therapy. Conclusions: Physical education can and should have an active role in the development of Bath Therapy. Organization and appropriate actions are required to utilize the results of the research so that it takes its rightful place.

KEYWORDS: thermalism, rehabilitation, hydrotherapy, Greek spa

INTRODUCTION

A fully adequate person should have a satisfactory level of performance in a variety of physical activities but also display social adaptability, emotional stability, mental effectiveness, and positive moral and cultural competence. This means psycho-spiritual, social, and physical competence (Barrow, 1983). The dysfunction of people due to their musculoskeletal problems and the ways to deal with them is a challenge for physical therapy. Lutrotherapy as an activity can contribute to the improvement of previous ones. It refers to the immersion of the whole body or part of it in some material (water, mud) for therapeutic purposes. The method of its application is with baths, strains, wraps, patches, mud baths, hydromassage - whirlpool baths (Health Education, 2000-2001). Greece has approximately 2,500 thermo-metallic springs, of which 60 have been declared therapeutic. These are distinguished into sources of tourism and local importance depending on their capacity. According to E.O.T data, 17 of the 23 sources of tourist importance are currently operational, while 31 of the 37 sources of local importance are currently operational. The geographical distribution of the sources is random and related to the morphology of the country's terrain. Many of them are located near tectonic faults and in areas characterized as volcanic. Hot baths exert a thermal action, a chemical action that affects health favorably. Various studies show that Bath Therapy affects several ailments. Specifically, Kurabayashis et al., (1997) report that therapeutic exercise in acidic thermal waters is effective for the rehabilitation of Chronic Obstructive Pulmonary Disease. Tanizaki et al., (1984) report that exercise in a thermal water pool improves respiratory function in steroid-dependent asthmatic patients. Yokotas et al., (1997) concluded that exercise in thermal water not only improves asthma symptoms but also depression and related mental conditions. Mitsunobu et al., (2001) reported that increased levels of bronchial hyperreactivity were reduced by a spa treatment. Ohtsuka et al., (2002) pointed out that physical exercise in simple alkaline thermal waters once to twice a week, for 30 minutes and 6 weeks, is effective in improving the immune system and has stress-relieving properties in patients who are in the recovery phase from cardiovascular diseases. Nobunaga et al., (2002) demonstrated that long-term spa treatment for more than two weeks is not necessarily required to improve QoL, but on the contrary, short-term spa treatment (3-7 days) is sufficient to see improvement

Historically, the concept of quality of life begins with cancer treatments. The severe toxicity associated with anticancer chemotherapy, surgery leading to amputation of a body part (eg breast), and the adverse effects of radiation therapy, which occur to prolong life and increase patient survival, have made patients, their caregivers, and health professionals wonder about the choice between 'quantity of life' versus 'quality of life'. The price of longer survival was paid through poor quality of life. Since then, the search continues for effective and less toxic treatment methods, drugs, and surgeries. Similarly, in the field of mental health, in the

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1960s, as a consequence of the shift to deinstitutionalization, it was believed that the quality of life of the psychiatric patient would be greatly improved by living with family. Later, the concept of family members' or caregivers' burden of caring for the psychiatric patient emerged. Weight was measured in both subjective and objective domains. Several factors such as type of symptoms, patients' physical or social disability, social support, social relationships, and coping mechanisms were shown to be related to caregiver-perceived burden (Chaturvedi & Muliya, 2016).

According to M. Tamburi (1992), the concept "Quality of Life" is identified with the subjective feeling of happiness, which is the result of the balance of the following factors: The functional state of the person, his biological harmonious functioning, his emotion, and cognitive state and his social status, possibly as a consequence of the above. This specific research acquires particular importance if one considers the absence of relevant research on the specific subject as well as the comparative advantage due to the natural wealth that our country has over other countries in combination with its utilization potential. The intervention of the science of physical education in this field captures the possibility of changing the quality of life of people with problems due to musculoskeletal dysfunctions.

By the term "musculoskeletal problems" we mean those conditions that occur in the muscles, tendons, bursae, nerves, and bones, including the neck, upper limbs, waist (lumbar area), and lower limbs. Cervical syndrome and low back pain are two of the most well-known musculoskeletal conditions, as are tendinitis and carpal tunnel syndrome (Palikhe et al, 2020). Musculoskeletal diseases are today the most common diseases affecting the population in all sectors and all forms. They cover a wide range of health problems. Musculoskeletal problems include back pain and spinal injuries, and repetitive strain injuries, including upper and lower extremity disorders. An important role in their appearance is played by the posture and position of the body during work, as well as the type of work performed. When the working posture differs from the neutral posture, in which the body is aligned and balanced while exerting minimal stress on the muscles, tendons, nerves, and bones, then the compressive effects on the aforementioned parts of the body (i.e., the muscles, tendons, joints, arms, legs, and shoulders) increase, resulting in musculoskeletal disease.

Musculoskeletal problems are the highest contributor to disability worldwide, accounting for 16% of all conditions, with low back pain predominating (Global Burden of Disease, 2017). The prevalence of chronic musculoskeletal conditions attributable to aging can lead to reduced physical work capacity. The incidence of back, upper and lower limb pain and fatigue are chronic problems (Palikhe et al., 2020). In Western countries, non-specific chronic musculoskeletal pain (CMP) represents one of the most common causes of functional disability and medical visits among the adult population (Wang et al., 2018). CMP, as a biological stressor, is a common risk factor for the development of depressive disorders (Alem et al., 2008). Pain-depression comorbidity exerts a negative effect leading to disease exacerbation, with approximately 85% of CMP patients severely affected by depression (Bair et al., 2003). Given the biological pathways shared by pain and depression, the presence of one negatively affects the other and has implications for the simultaneous treatment of both (Bair et al., 2003). Thus, it creates a serious biological stressor and generally coexists with psychological morbidities such as depression, thus creating significant barriers to the patient's treatment, management, and recovery (Sheng et al., 2017).

RESEARCH METHODOLOGY

This is a quantitative survey. The sample consisted of 200 people with musculoskeletal problems, who were recipients of spa therapy services. The purpose of this work is to find the correlation of Bath Therapy with the treatment and recovery from injuries and musculoskeletal problems. The subjects' performance was measured before and after their participation in a spa therapy program that included an average of ten sessions. Two questionnaires were used. The first one recorded information related to gender, age, occupation, somatometric characteristics, problems, and reasons that motivated the respondents to visit the spa towns as well as the frequency of visits. The second questionnaire was The Roland - Morris Low Back Pain and Disability Questionnaire which is weighted in the Greek language and records the functionality of individuals about the musculoskeletal problem they face, in the lumbar spine. The Roland Morris Disability Index is considered validated for chronic conditions and chronic disability, is the second most widely used, and has been recommended as a baseline measure for many musculoskeletal conditions. Other strengths of the questionnaire include its ease of use, user acceptance, and its availability in a variety of different languages. Although some newer questionnaires focus more on disability (e.g. the Quebec Scale) the widespread use of the Roland Morris Disability Index allows easier comparison with the literature (Stevens et al., 2015).

RESULTS

From the study of the completed questionnaires, information was obtained on gender, age, occupation, health problems and the reasons that prompted the sample to use spa treatments, and the frequency of visits to spa towns. There are clear indications that the use of thermal water with a frequency of at least ten visits per year, favors people with lumbar problems. There is an improvement in mobility (better functionality in the spine), but also in the bathers' quality of life as they perceive a reduction in pain, reduced irritability, and a better mental mood. In addition, it was found that: In the correlations of gender, it was seen that women are those who avoided socializing during the previous week because of the shoulder, elbow, or hand problems, compared to men, at a

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significance level of $p=0.000$. Regarding the levels of pain felt by the sample, based on gender, it appeared that men were the ones who felt "great pain" and "greater pain" at night when in bed, compared to women, at a level significance $p=0.000$.

The professional action of the physical education scientist can play a decisive role in maximizing the effectiveness of the intervention through spa therapy.

The results of the research show that the spa therapy led to an improvement in the musculoskeletal conditions of the patients, who were used as a sample in the research, one year later. In particular, it is reported that in 2019 the sample was in a worse state of health, compared to 2020, after the re-examination of the same individuals.

When repeating the filling of the WOMAC questionnaire the following year to examine whether the levels of stiffness and pain had changed, it emerged that in 2020 the effect of spa therapy showed better results, compared to the answers given by the same sample the previous year, i.e., 2019. DASH questionnaire results showed that in 2020 the effect of spa therapy produced better results in the sample's ability to perform specific tasks. Regarding the KOOS questionnaire scores during the one-year follow-up in the dimensions "Symptoms", "Stiffness", "Pain", "Functioning in daily life" and "Quality of Life" were found to change significantly during follow-up. Regarding the dimension "Functioning in sports and recreational activities" there were no statistically significant differences between the initial measurement and one year later.

Compared to the correlations made among the 162 people in the sample, the results showed that the majority of women gave the answers "great" and "greater" stiffness than men. Married people were the ones who could not do heavy work compared to other family situations. Correlations based on educational level showed that those who are primary school graduates were forced to limit their work or life as a result of their shoulder, elbow, or hand problem. Also, patients over the age of 65 were the ones who showed a greater degree of inability to perform various tasks at home. Finally, smokers were the ones who reported poorer health outcomes than non-smokers. The results are in line with other studies on the beneficial effect of bath therapy and the improvement of the Quality of Life in patients with musculoskeletal problems, as the majority of authors report improved mood and pain relief.

CONCLUSIONS

DISCUSSION

Physical education can play an active role in the development of Bath Therapy. Organization and appropriate actions are required to utilize the results of the research so that it takes its rightful place. The fact that people receiving spa therapy services experience significant functional improvement results is a positive sign for the field. In a world that is becoming more and more sensitive to health issues and aware of the need for a healthier and more natural way of life, the future of Spas looks optimistic. However, their further development and success in Greece will depend on the existence of a well-planned, long-term program that will include the best ideas and the cooperation of all stakeholders and will aim to provide high-quality and competitive services both domestically and internationally. and in the global market.

Bath Therapy, or Spa Baths, has been known since ancient times for its beneficial effects on health and especially on musculoskeletal problems, while new research shows that it contributes to a better Quality of Life for patients with musculoskeletal conditions. In the present study, a sample of 162 people was used, which were examined in two time periods: 2019 and 2020, and it was concluded that Bath Therapy has significant benefits to the health and Quality of Life of patients with musculoskeletal diseases, as there is a statistically significant difference before and after the bath therapy. Musculoskeletal problems have a significant impact on the health and quality of life of patients. In particular, between the responses of the 2019 and 2020 questionnaires, it appeared that the responses in 2020 showed better health and better results in stiffness and pain levels. Also, the results of the DASH questionnaire showed that in 2020 the effect of spa therapy produced better results in the ability of the sample to perform specific tasks. Scores during the one-year follow-up in the dimensions 'Symptoms', 'Stiffness', 'Pain', 'Functioning in daily life', and 'Quality of Life' were found to change significantly during follow-up. Regarding the dimension "Functioning in sports and recreational activities" there were no statistical differences between the initial measurement and one year later. Gender correlations showed that women were those who avoided socializing during the previous week because of the shoulder, elbow, or hand problems, compared to men, at a significance level of $p=0.000$. Also, women were those affected by shoulder or elbow, or arm pain and were unable to sleep, compared to men, at a $p=0.000$ level of significance. At the same time, it appeared that women have changed their lifestyle to avoid dangerous activities for the knee, compared to men, at a significance level of $p=0.000$. In relation to age, it appeared that those who are over 66 feel less able, less useful, lost confidence, because of shoulder or elbow, or hand problems, at a significance level of $p=0.000$. Also, the age group over 66 years faces significant difficulty when going up or down stairs, at a significance level of $p=0.000$. Correlations by educational level showed that those who are primary school graduates, during the previous week, had to limit their work or life as a result of the problem they are experiencing with their shoulder, elbow, or hand; at a significance level of $p=0.000$. Also, Primary School graduates responded that they felt knee pain during activities, at a significance level of $p=0.000$. In the correlation based on marital status, it was seen that married people, at a significance level of $p=0.000$, are the ones who are most affected and cannot sleep at night because of shoulder or elbow, or arm pain. At the same time, married people are affected when they do heavy housework, in relation to the other groups, at a significance level of $p=0.001$. In the results related to the change in the Quality of Life, the sample gave better answers in the year 2020 compared to the year 2019, when

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the first part of the research was done. This result shows that Bath Therapy contributed to the improvement of the health of patients with musculoskeletal diseases, resulting in an improvement in their quality of life. Showing a vast history and experience in thermalism, the Baths of Greece are blessed with a series of competitive advantages, such as Natural Mineral Water, geographical location, climate, and natural environment, factors that favor the improvement of the quality of life of users, as they act therapeutically on their psychology and consequently creating the bases and conditions for the physical restoration of the users' health. Of course, further studies are needed on the benefits of spa therapy in patients with musculoskeletal conditions.

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