

HEALTH PROMOTION IN BULGARIAN BALNEOTHERAPY CENTERS

Diana POPOVA-DOBREVA¹

Abstract: *Following Johnston, Puczkó, Smith, and Ellis (2011), Hitz et al. (2014) define wellness tourism as: 'involving people traveling to a different place to proactively pursue activities that maintain or enhance their personal health and well-being, and who are seeking unique, authentic or location-based experiences or therapies that are not available at home'. The present study reveals the possibilities for health promotion by analyzing the services offered in 51 certified balneotherapy centers in Bulgaria.*

Key words: *healthy lifestyle wellness tourism.*

1. Introduction

A healthy lifestyle is essential for maintaining good physical and mental health. It involves making conscious choices that promote well-being, such as eating a balanced diet, getting regular exercise, managing stress, and avoiding harmful habits such as smoking and excessive alcohol consumption.

Regular exercise is also a vital component of a healthy lifestyle. Engaging in physical activity for at least 30 minutes a day can improve cardiovascular health, strengthen muscles and bones, and reduce the risk of chronic diseases. Exercise can also improve mood, reduce stress, and promote better sleep.

Ruegsegger G.N. et al. [15], point out that regular exercise has been shown to be associated with health maintenance and is a powerful tool in the fight against and treatment of many chronic diseases. The application of exercise and its relation to well-being has been explored by a series of researchers [6], [7], [9].

Managing stress is another important aspect of a healthy lifestyle. Chronic stress can have negative effects on physical and mental health, including increasing the risk of depression and anxiety, and compromising the immune system. Practicing stress-reduction techniques such as meditation, yoga, or deep breathing can help reduce stress and promote relaxation.

Hirooka N. et al. [4] studied the health-

¹ Faculty of Public Health, Health Care and Tourism, *National Sports Academy, Sofia, Bulgaria*

related lifestyle behaviors of 3190 women (66.2%) and 1630 men (33.8%). The authors conclude that the adequacy of coping with stress directly influences the individual to determine their numerous health-related behaviors. Stress coping skills can be critical targets for health promotion. Research in this direction has been carried out by a series of researchers [1], [8], [13], [16].

2. Health Tourism

2.1. Definition of health tourism

Hitz et al. (2014) define wellness tourism as: 'involving people traveling to a different place to proactively pursue activities that maintain or enhance their personal health and well-being, and who are seeking unique, authentic or location-based experiences or therapies that are not available at home'. Mainil et al. define that health tourism consists of three main components: **medical, wellness and spa tourism**, as wellness and spa tourism overlap. Health tourism comprises around 5% of general tourism in the EU28 and contributes approximately 0.3% to the EU economy. Health tourism in the EU: a general investigation 2017 [19].

2.2. Health tourism and balneotherapy

Verhagen A.P. et al. [17] define balneotherapy as bathing the balneotherapy as bathing in natural mineral or thermal waters (e.g. mineral baths, sulphur baths, Dead Sea baths), using mudpacks or doing both. The authors emphasize that despite its popularity, reported scientific evidence for the effectiveness or efficacy of balneotherapy is sparse.

Matsumoto [12] evaluates the role of

balneotherapy in Rehabilitation Medicine. According to the author although the mechanism of balneotherapy is not yet completely understood, balneotherapeutic procedures are mainly performed for the prevention, treatment, and rehabilitation of musculoskeletal diseases. Matsumoto adds that balneotherapy procedures have also proven useful for various other indications such as for the treatment or rehabilitation of dermatological diseases, immunoinflammatory diseases, chronic pain syndromes, chronic cardiac diseases, and metabolic syndromes or neurological diseases as well as in the rehabilitation of patients with psychiatric conditions [12]. Evidence in this direction has been provided in a series of scientific studies [2], [3], [10], [14].

Modern research is investigating balneotherapy and spa treatments for post covid conditions. Masiero et al. conclude that it seems that the use of balneotherapy (bath, mud therapy) may improve human immune function, both humoral and cell mediated. The interest of researchers is due to the fact that there is variety and heterogeneity of balneotherapy modalities, characteristic of applications, water and mud compositions, the possible presence of radioactive properties [11].

Kardeş, S. proposed hypothesis is that spa therapy can be used in postacute rehabilitation for survivors of COVID-19 with persistent symptoms. According to the author there are some important clinical implications: first, survivors of COVID-19 may benefit from spa therapy and furthermore, spas may increase the number of places delivering rehabilitation to survivors of COVID-19 [5].

3. Research Methodology

The objectives of this study are: (1) to reveal the conditions for health promotion in Bulgarian balneotherapy centers and (2) to establish the digital representation of the procedures offered.

The Bulgarian National Tourist Register lists the certified centers according to Ordinance No. 04-14 of October 9, 2019 on the terms and conditions for certification of „Balneotherapy (medical SPA) center“, „SPA center“, „Wellness center“ and „Thalassotherapy center“.

During the research we found 51 records of balneotherapy centers in the national tourist register. The digital representation of 43 of them was analysed [18].

3. Data analysis and Interpretation

Before the application of procedures in the Bulgarian balneotherapy centers, a medical examination by a specialist is carried out.

The prescribed therapies are in accordance with the health condition of the patient/client as well as according to the budget for treatment. It is precisely the value of the treatment that can be the reason for limiting the applied treatment and, accordingly, achieving the maximum possible effectiveness of the treatment.

In leading balneotherapy centers in Bulgaria, treatment programs with different orientations have been compiled, such as General recreation; Arthro therapy; Reflexology /kinesitherapy; Anti-stress; Thalasso therapy; Oxygen therapy; Detox; Post Covid. Usually the duration of the programs is between 5-7 to 10-15 days. In some of the centers, pricing is available on a treatment day basis.

Values of individual procedures such as Electrotherapy; Kinesitherapy; Mud treatment; Aroma therapy; Hydrotherapy; Curative massage; Pressure therapy and lymphatic drainage with apparatus are also calculated.

Over 92 percent of the balneotherapy centers have mineral water. Most of them are also located in luxury hotels, which is an additional advantage for the development of wellness tourism in Bulgaria (Figure 1).

Complex programs for the treatment and prevention of various conditions are presented in detail on the websites of 28 of the balneotherapy centers. Individual procedures are detailed as shown in Figure 2.

An indisputable advantage for the development of health tourism in Bulgaria is the presence of numerous mineral springs, as well as the riches of the Black Sea.

Availability of mineral water (n=43)

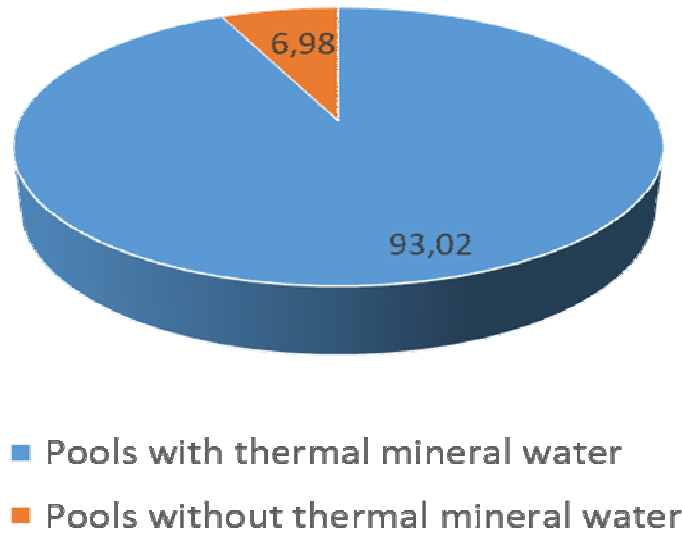


Fig. 1. *Availability of mineral water*

Types of procedures in Bulgarian balneotherapy centers (n=43)

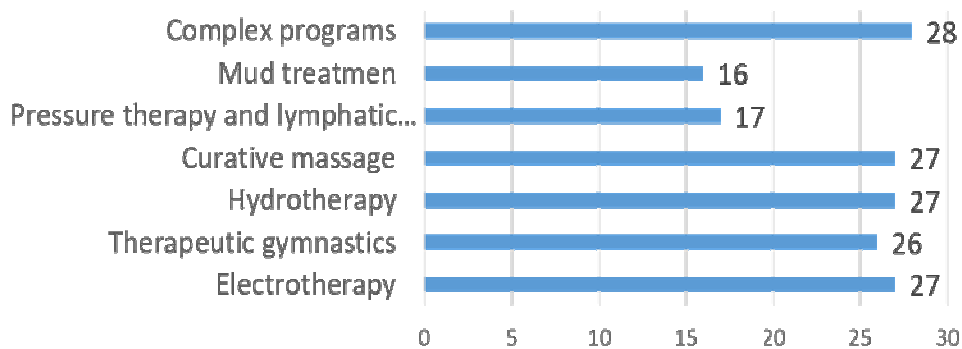


Fig. 2. *Types of procedures in Bulgarian balneotherapy centers*

In figure 3 it is presented duration of balneological programs. In the largest number of centers, 6 day programs are offered. This fact is related to the general administration of 16 balneotherapy

centers. Other more common durations of balneotherapy programs are 7, 5 and 10 days respectively. Due to the need to accumulate the effect, the expected short-term programs are less represented.

Modern conditions and trends are towards reducing the duration of balneotherapy, which in more classical recommendations is with a longer length of stay and days with a break in the procedures. These trends are most likely related to the presumption of treatment affordability so that more patients can afford it financially.

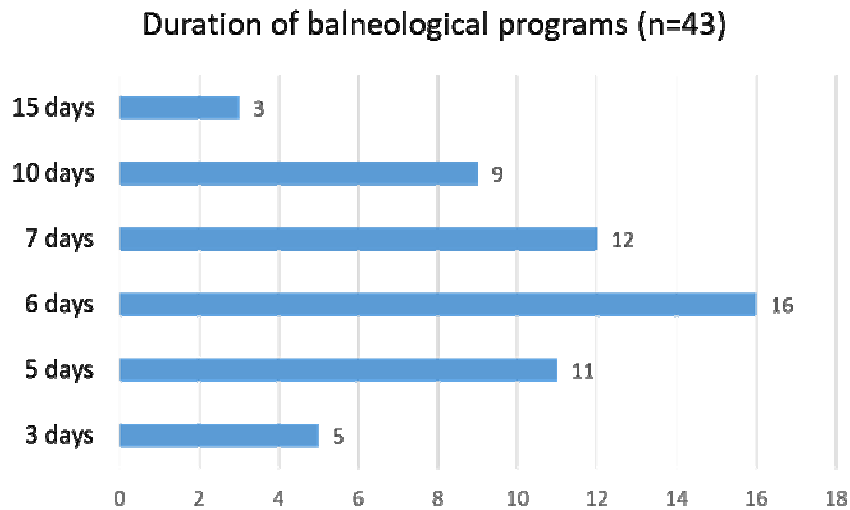


Fig. 3. *Duration of balneological programs*

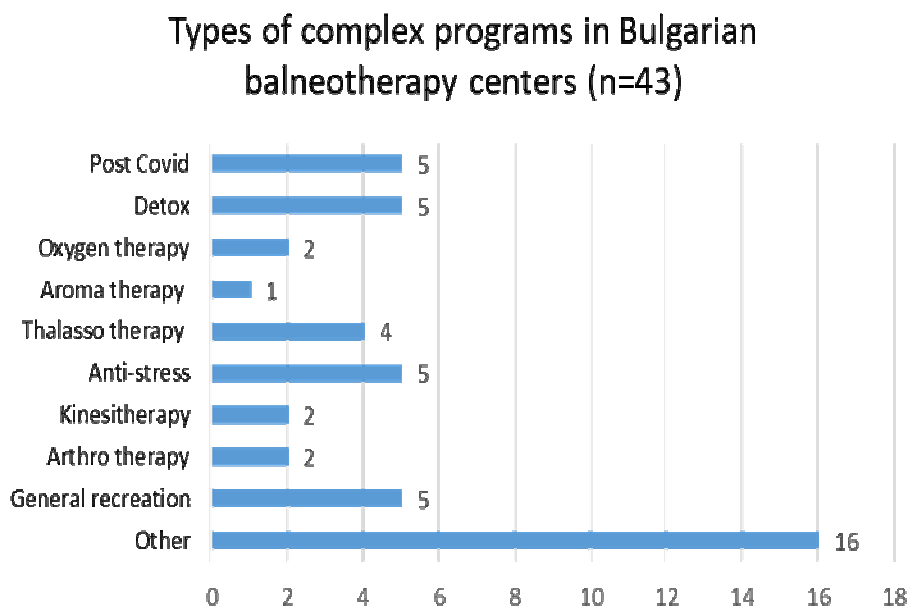


Fig. 4. *Types of complex programs in Bulgarian balneotherapy centers (n=43)*

In figure 4 are presented types of complex programs in Bulgarian balneotherapy centers.

Complex programs for balneoprophylaxis and balneotherapy in the above-mentioned 16 centers are represented in the figure as Other. Their direction is according to the affected system and is distributed as:

- renal and urological diseases;
- peripheral nervous system diseases;
- gastrointestinal and biliary-hepatic diseases;
- diseases of the musculoskeletal system.

Special programs aimed at detoxification and general relaxation and anti-stress are more common. Thalassotherapy programs include baths with algae extract; full body massage with oil; masks with algae and others.

Detox programs include a combination of diet and food and fitness – individual training after preliminary consultation with a physiotherapist and preparation of an individual training program; detoxification; underwater; anti-cellulite - manual or vacuum massage; sauna or steam bath and other.

The anti-stress programs included reflexology; medicinal herbs; anti-stress massage; psycho-regulatory therapeutic gymnastics.

The specially developed post-Covid recovery programs offered are current. They include medical examination; diet; respiratory kinesitherapy; aromatherapy; vibration massage; hydrotherapy bath with magnesium; mineral water pool; Finnish sauna; herbal sauna with mint, lemon balm, chamomile, etc. magnetotherapy; healing massage with magnesium oil and others.

4. Conclusions

Our research reveals the presence of excellent natural and logistical conditions that meet the requirements for wellness tourism according to the definition of Hitz et al. (2014) 'involving people traveling to a different place to proactively pursue activities that maintain or enhance their personal health and well-being, and who are seeking unique, authentic or location-based experiences or therapies that are not available at home'.

Although, for the most part, the digital presentation of the services is informative and comprehensive, there are gaps in their presentation at some of the centers.

The available excellent conditions for balneotherapy services in Bulgaria are a prerequisite for the development of health tourism and the expansion of rehabilitation places, including after the problematic post-covid conditions.

References

1. Anand, C., Hengst, K., Gellner, R., et al.: *Eight Weeks of Lifestyle Change: What are the Effects of the Healthy Lifestyle Community Programme (Cohort 1) on Cortisol Awakening Response (CAR) and Perceived Stress?* In: *Chronic Stress* (Thousand Oaks). 2022, 6:24705470221099206. doi: 10.1177/24705470221099206.
2. Blain, H., Bernard, P.L., Canovas, G., et al.: *Combining balneotherapy and health promotion to promote active and healthy ageing: the Balaruc-MACVIA-LR[®] approach*. In: *Aging Clin Exp Res.*, 2016, 28(6):1061-1065. doi: 10.1007/s40520-016-0596-4.
3. Gálvez, I., Torres-Piles, S., Ortega-Rincón, E.: *Balneotherapy, Immune*

- System, and Stress Response: A Hormetic Strategy?* In: *Int J Mol Sci.* 2018, 19(6), p. 1687. doi: 10.3390/ijms19061687.
4. Hirooka, N., Kusano, T., Kinoshita, S., et al.: *Influence of Perceived Stress and Stress Coping Adequacy on Multiple Health-Related Lifestyle Behaviors.* In: *Int J Environ Res Public Health*, 2021, 9(1), p. 284. doi: 10.3390/ijerph19010284.
 5. Kardeş, S.: *Spa therapy (balneotherapy) for rehabilitation of survivors of COVID-19 with persistent symptoms.* In: *Med Hypotheses*, 2021, 146:110472. doi: 10.1016/j.mehy.2020.110472.
 6. Kikuchi, N., Ohta, T., Hashimoto, Y., et al.: *Effect of Online Home-Based Resistance Exercise Training on Physical Fitness, Depression, Stress, and Well-Being in Middle-Aged Persons: A Pilot Study.* In: *Int J Environ Res Public Health*. 2023, 20(3):1769. doi: 10.3390/ijerph20031769.
 7. Kong, L., Ren, J., Fang, S., et al.: *Effects of traditional Chinese mind-body exercise-Baduanjin for type 2 diabetes on psychological well-being: A systematic review and meta-analysis.* In: *Front Public Health*. 2022, 10:923411. doi: 10.3389/fpubh.2022.923411.
 8. Legaard, G.E., Feineis, C.S., Johansen, M.Y., et al.: *Effects of an exercise-based lifestyle intervention on systemic markers of oxidative stress and advanced glycation endproducts in persons with type 2 diabetes: Secondary analysis of a randomised clinical trial.* In: *Free Radic Biol Med*. 2022, 1; 188, p. 328-336. doi:10.1016/j.freeradbiomed.2022.06.013.
 9. Lucini, D., Pagani, M.: *Exercise Prescription to Foster Health and Well-Being: A Behavioral Approach to Transform Barriers into Opportunities.* In: *Int J Environ Res Public Health*, 2021, 18(3), p. 968. doi: 10.3390/ijerph18030968.
 10. Lv, X., Wang, J., Bao, Y., et al.: *The effectiveness of balneotherapy and aquatic exercise on bone metabolism: A systematic review and meta-analysis.* In: *Complement Ther. Clin Pract.*, 2021, 44:101429. doi: 10.1016/j.ctcp.2021.101429.
 11. Masiero, S., Maccarone, M.C., Magro, G.: *Balneotherapy and human immune function in the era of COVID-19.* In: *Int J Biometeorol.* 2020, 64(8):1433-1434. doi: 10.1007/s00484-020-01914-z.
 12. Matsumoto, S.: *Evaluation of the Role of Balneotherapy in Rehabilitation Medicine.* In: *J Nippon Med Sch.* 2018; 85(4), p. 196-203. doi: 10.1272/jnms.JNMS.2018_85-30.
 13. Mattioli, A.V., Sciomer, S., Maffei, S., et al.: *Lifestyle and Stress Management in Women during COVID-19 Pandemic: Impact on Cardiovascular Risk Burden.* In: *Am J Lifestyle Med.* 2020, 15(3), p. 356-359. doi: 10.1177/1559827620981014.:
 14. Naumann, J., Sadaghiani, C.: *Therapeutic benefit of balneotherapy and hydrotherapy in the management of fibromyalgia syndrome: a qualitative systematic review and meta-analysis of randomized controlled trials.* In: *Arthritis Res Ther.* 2014, 16(4):R141. doi: 10.1186/ar4603.
 15. Ruegsegger, G.N., Booth, F.W.: *Health Benefits of Exercise.* In: *Cold Spring Harb Perspect Med.* 2018, 8(7):a029694. doi: 10.1101/cshperspect.a029694.

16. Spence, J.D., Barnett, P.A., Linden, W., et al.: *Lifestyle modifications to prevent and control hypertension. 7. Recommendations on stress management.* In: Canadian Hypertension Society, Canadian Coalition for High Blood Pressure Prevention and Control, Laboratory Centre for Disease Control at Health Canada, Heart and Stroke Foundation of Canada. CMAJ. 1999, 160(9 Suppl): S46-50.
17. Verhagen, A.P., Bierma-Zeinstra, S.M., Boers, M., et al.: *Balneotherapy (or spa therapy) for rheumatoid arthritis.* In: Cochrane Database Syst Rev. 2015 Apr 11; 2015(4):CD000518. doi: 10.1002/14651858.CD000518.pub2.
18. <https://ntr.tourism.government.bg/CategorizationAll.nsf/spa.xsp> 12/01/23
19. Research for TRAN Committee - Health tourism in the EU: a general investigation (europa.eu) 20/01/23