



THE WATER ENVIRONMENT - AN EFFECTIVE TOOL FOR PROMOTING HEALTH AND WELLNESS

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ABSTRACT

Introduction: According to the annual report by the United Nations on the World Happiness Index, aquatic practices demonstrate a growth rate that is higher than the overall growth of all recreational types of physical activity. **Methods:** We conducted a comparative analysis of innovative aquatic programs implemented by gender, for individuals in active age. **Results:** The immune system's health is improved through the hardening effect of the aquatic environment and zone-directed physical activity, according to gender and age. Aquatic programs supported by scientific evidence of effectiveness combined with personalized dietary regimens are increasingly desired and booked 2-3 weeks in advance. Aquatic practices are an effective tool for healthy prevention and a successful strategy against panic attacks. Aqua practices promote overall health status and contribute to a balanced wellness lifestyle. **Discussion:** Practicing a culture of relaxation and wellness, individuals are urged to incorporate water-based activities as one natural health source into their daily routines or leisure time. Aquatic practices are a winning tool for investing in individual, family, and corporate health, increasing the level of Well-being. **Conclusion:** Bulgaria is blessed with an abundance of mineral springs, both hot and cold, as well as curative peloids made from mud, salt, clay, or sludge from mineral springs, lakes, seas, or rivers. These natural and eco-friendly sources provide a wealth of health benefits straight from nature.

Key words: Water influences, health from nature, health prevention & hardening, wellness lifestyle.

INTRODUCTION

As per the United Nations' annual report on the World Happiness Index, aquatic activities exhibit a higher growth rate compared to other forms of recreational physical activity overall (1-3). In this article, an analysis is provided regarding health-prophylactic procedures, as well as the effects of aqua practices and specific hydro or Thalasso therapies (4-6). The effectiveness of these treatments reflects a balanced approach to ensuring good health and can lead to a more wellness-oriented lifestyle.

The culture of recreation and wellness teaches citizens to include wet procedures from natural sources in their daily schedules or leisure (7, 8). After the Global pandemic crisis, the recreational practices demonstrate a growth rate that is higher than the overall growth of the tourism (9, 10). People who are traveling are requesting information about contact and health coming from the natural heritage sites. (11, 12). The immune system's health is improved through the hardening effect of the aquatic environment and zone-directed physical activities inside or outside water (13 -17). The well-being of individuals, both physically and mentally, has a significant impact on society as a whole. However, achieving a healthy balance is a personal and cultural choice (18, 19). Those who maintain good health are more productive and innovative in their professional lives

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compared to those who suffer from chronic health issues (20-22). Additionally, one's self-esteem and emotional well-being can also impact their relationship with nature and the ecological balance of the planet (23). Around the world, the recreational industry requires skilled professionals who have received their diploma in accredited programs and are capable of promoting their products in at least two languages (24, 25).

METHODS

Aim: The aim of this study was to demonstrate how water-based therapies and Wellness programs can improve immune system health by utilising the hardening effect of the aquatic environment and targeted recreational activity, with consideration given to age and gender, in order to promote a healthy lifestyle.

Subject: The study was conducted among 110 participants in Wellness & Spa practices. The subjects were mostly Bulgarian, with an average age of 33 years and a balanced equity of both gender. They were distributed into three different groups (21-31 years; 32 – 41 years; 42-51 years) by their background in aquatic practice.

Expertise and funding: The study was carried out to examine the recreational industry needs for water influences to increase the immune system health. The study participants, consisting of both working and learning personnel in the field, gave their consent for the publication of their data. The study was conducted from June 2021 to June 2022 and involved administering a psychometric test to gauge the opinions of the respondents.

Procedures: The results were analysed to determine the relative importance of various indicators for the efficacy of the water procedures. The survey also explored the desired content and design of a new zone oriented recreational programs that are being developed to support personnel in this industry. This new recreational programs will serve as a tool to improving the quality of services in the Niche tourism sector.

Participants. One hundred and eight elite athletes, men and women, with respective mean ages of 24.4 and 23.2 years were studied. All were subjected to the same experimental task applying water influences. The primary data are collected at the Centre for the Recovery of

Bulgarian Olympic Athletes and we publish details with the permission of the Director (signed declaration of informed consent).

RESULTS

Aquatic programs supported by scientific evidence of effectiveness combined with personalised dietary regimens are increasingly desired and booked 2-3 weeks in advance. Aquatic practices are an effective tool for healthy prevention and a successful strategy against panic attacks (12-15). Aqua practices promote overall health status and contribute to a balanced wellness lifestyle (16-19).





Bulgaria has diverse in content and healing properties mineral springs, peloids (mud therapy or mud treatment with clay or sedimentary mud from mineral springs), which are natural and ecological source of health from nature. Thermal treatment is a field in Recreation (health prevention) and tourism, which is to be developed and has a proven health-preventive and antiaging effect. The general classification of the most common types is determined by the temperature of the water, its chemical composition and the mechanical force of impact when using specialized equipment (**Table 1**).

The mechanism of the physiological impact of the aquatic environment is determined mainly by its physical properties. The density and thermal conductivity of water make it an effective environment for health prevention, recreation and a positive cosmetic effect. The body's ability to give off and receive heat is activated as a result of the temperature contrast between body temperature and that of the aquatic environment. Under the influence of water procedures, enzyme systems are activated in the skin that directly affect vascular tone and blood circulation. This complex mechanism is realised by the emergence of nerve impulses passing through the spine and reaching the thermoregulatory centres in the cerebral cortex. Depending on the nature and strength of the stimulus, excitatory or retention impulses are transmitted to the body's organs and systems. Therefore, water procedures (hot or cold) cause complex reactions, but the perfect system of thermoregulation of the body always keeps the body temperature constant and is one of the most important vital functions of the human body (37 ° C). The impact of water treatments

with warm water leads to the following main physiological results:

- Active hyperaemia (abundant blood flow) to the skin;
- Active functions of the sweat glands;
- Activation of metabolism.

Table 1. The impact of water procedures on recreational and cosmetic purposes.

Type of natural sources	Pictures
<p>The Hot mineral or enriched waters reflect to the activation of the sweating glands function</p>	
<p>The Sea Luga (100% salted water) or simulation reflect to the intake of salts and minerals through the skin</p>	
<p>The healing Peloids, Clay, rivers or lakes sediments cause an active hyperemia</p>	
<p>Forest springs water waterfalls, streams, and rivers increase the exchange of body substances</p>	

Regular application of various influences in the aquatic environment contributes to the efficiency of the body's thermo-regulatory systems. Improving thermoregulation means increasing resistance to colds and boosting performance. Thermal regulation is carried out by the processes of heat exchange, expressed by heat reception and heat transfer. These balancing processes maintain the temperature conditions in the body at a constant level. When

cooling procedures are applied, the body temperature returns to its original level much faster. When the Spa therapist offers tourists to use water treatments (passive) or physical activity in water (dynamic), it is important to comply with two main categories of rules: psychological and functional. The inclusion of water impacts in tourist packages satisfies two requirements. Firstly, it makes the offered packages more marketable and secondly, along

with the functional one, it also has a cosmetic effect. The exact dosage of the effects would lead to a sense of customer satisfaction as a result of which the service will be sought after repeatedly (**Table 2**).

In addition to temperature contrasts, water treatments have a powerful recreational effect through mechanical irritation, which activates the peripheral nervous system. According to the

Bulgarian edition of the medical encyclopaedia, the skin is an important sensory organ. It contains various mechanoreceptors. They perform tactile sensation, which includes sensations of touch, pressure and vibration. Tactile sensations also include the sensations of stretching the skin, tickling, itching and the movement of an object on the surface of the skin.

Table 2. Psychological rules for compliance with exposure to water procedures.

PSYCHOLOGICAL RULES			
<i>The situation</i>	<i>Side irritants</i>	<i>Positive arguments</i>	<i>Price</i>
Luxurious environment and smart hardware	Music background, individual use of the service, Aroma therapy	Physiological argumentation and examples from the lives of celebrities	High
Hardware equipped middle class	Silence and partitioned perimeter	Tip for the effect of a separate device	Medium/Average
Standard bathtubs and swimming pools	Group use of the procedure	Example with the practice in other countries	Low

In addition to tactile sensory, mechanoreceptors can receive information about deep sensory perception. It includes the sensations of movement, strength and direction of movement, muscle tone, position of the body and the movement of its parts in space. In conclusion, the common name mechanoreceptors include touch, pressure and vibration receptors (tactile receptors) and proprioceptors. An important

effect is the hydrostatic pressure, which is expressed in a light, evenly distributed massage in the direction of lymphatic and venous outflow from the entire periphery. The dosage is determined according to the desired end result of agitation or relaxation. In this regard, the Wellness & Spa consultant needs to take into account the body's reactions to exposure to water treatments (**Table 3**).

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Water treatments cause reactions on the part of the nervous system. The activity of all other bodily systems is determined by these reactions. Warm water, applied for a short time, excites the nervous system, and when applied for a long time, reduces excitatory processes and has a

calming effect. Water treatments with indifferent temperature have an optimal effect on the Central Nervous System (CNS). Contrasting intense temperature effects (with hot and cold water) have a pronounced arousing effect on the body of a healthy person (**Table 4**).

Table 4. System nervous Reactions inside the body during the water procedures.

Nervous system reactions			
T° of water	Timing	Nervous system reaction	Muscular tone
Cold / Warm	1-2 min	Exciting action	Toning effect
Indifferent	20 min	Laxative effect	Eliminates fatigue
Warm / Cool	10 min	Laxative effect	Improves functional capacity
Hot	10 min	Laxative effect	Deeply restores

Recreational water procedures

Water procedures that determine the recreational and cosmetic impact, both during

recreation and tourism, and in the daily routine (Figure 1):



Figure 1. Classification of water procedures with health-preventive or cosmetic applicability.

DISCUSSION

Practicing a culture of relaxation and wellness, individuals are urged to incorporate water-based activities as one natural health source into their daily routines or leisure time. Aquatic practices are a winning tool for investing in individual, family, and corporate health, increasing the level of Well-being. We discuss the benefits of basic water procedures that people can apply in their everyday schedule in order to achieve a Wellness lifestyle. We advise the 2-3-time weekly use of specific

hydrotherapies, to have profit from their healthy effects, regarding:

- Tangentor
- Pearl bath
- Jet shower
- Jacuzzi
- Chemically enriched water procedures (drug baths)

Bulgaria is blessed with an abundance of mineral springs, both hot and cold, as well as curative peloids made from mud, salt, clay, or sludge from mineral springs, lakes, seas, or rivers. These natural and eco-friendly

sources provide a wealth of health benefits straight from nature.

CONCLUSIONS

In conclusion, based on the analysis and discussion of the results, the following conclusions can be drawn:

1. Various water treatments have a positive impact on the body's ability to regulate temperature.
2. Improvement in thermoregulation leads to increased resistance to colds and activate the immune system health.
3. Proper dosing of water treatments leads to customer satisfaction and repeat business.
4. The impact of water treatments with hot water leads to the following main physiological results:
 - active hyperemia (abundant blood flow) to the skin;
 - active functions of the sweat glands;
 - activating metabolism.

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