



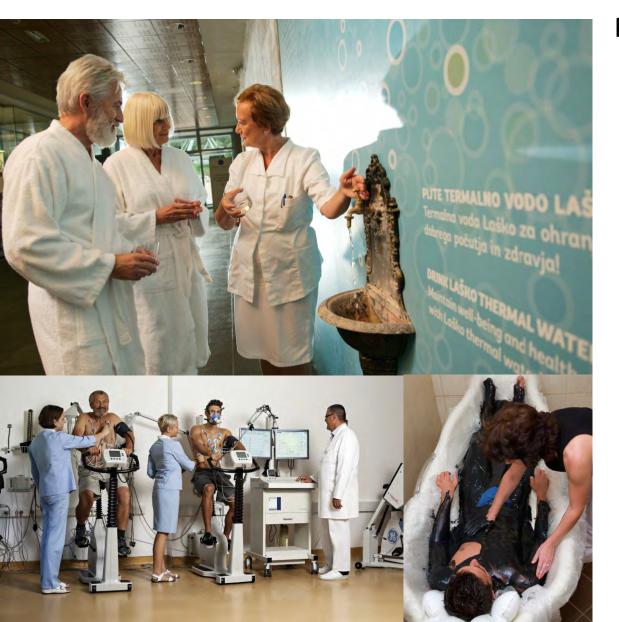


Study and evaluation of good practices existing "SPA THERAPY & COVID" on the European market February-July 2022

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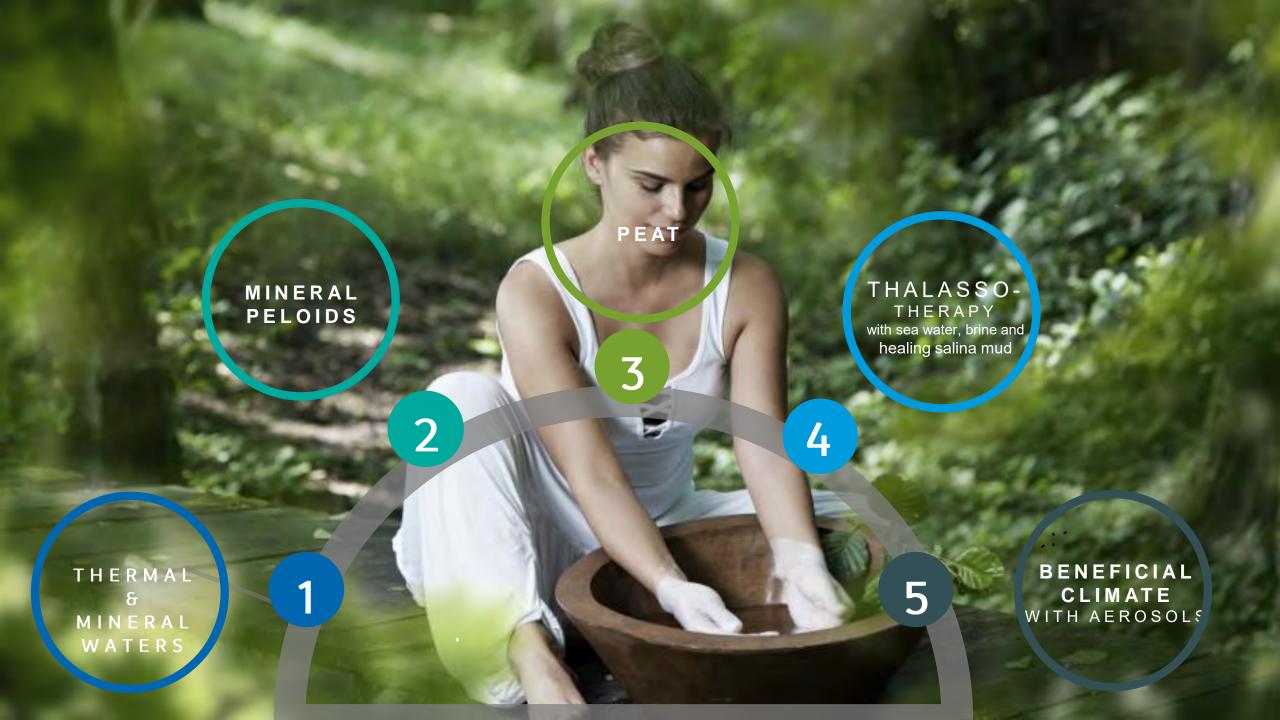
Result of post corona treatments in medical spas





Patients have the following improvements:

- Improved lung ventilation
- Strengthened immunity
- Improved peripheral circulation
- improved inspiratory muscle strength
- better oxygen saturation
- better sleep, lower level of fatigue, better exercises tolerance
- significant improvement in dyspnea and fatigue,
- increased exercise capacity and quality of life
- Secondary diseases are more regulated (diabetes, rheumatic diseases, obesity...)
- Patients are able to return to normal physical and sports activities
- The goal is to help post-Covid patients overcome the problems of pain, weakness and asthenia which, at times, persist for a long time
- change of environment positive effect



Phase 1: Inventory of available data, studies and analyses

- Subject: product, price, duration, content, coverage, target, evaluation or scientific demonstration of the product's effectiveness.
- Analysis and a synthesis of the GOOD PRACTICES "SPA THERAPY & COVID" existing in Europe

Schedule 1 Phase: online survey developed 15.February 2022

The survey sent: 23.February 2022 with deadline 11./18 Marc, last submission was accepted on March 22 More than 50 applications – 42 in the group of best and good practices

Phase 2: Qualitative survey with the European actors of thermalism

survey to a selection of thermal actors with the objective to measure:

- Formalizing the feelings of customers who have tested these offers; survey sent: 18. May, deadline 6th June, last submission will be accepted 20. June 2022.
- The relative importance that the actors give to this issue interviews with 8 partners;

STUDY SPA THERAPY & COVID - 2022

Survey – digital online questionnaire (N=42) from 16 countries

Full paid medical service: SLOVAKIA, LUXEMBOURG, ICELAND
Paid for authorized members: LITHUANIA, SLOVENIA, ITALY, CZECH REP.
Good examples: LATVIA, ROMANIA, CROATIA, AUSTRIA, GERMANY, SERBIA
Only private payers: BULGARIA



SLOVAK SPAS, climate health resorts are the FRIST IN THE EU with accepted full paid post corona programms - more than 20 medical spas are involved

The dominant symptoms to send patients to the specialized medical spa facility:

- A. Respiratory problems
- B. Cardiovascular diseases
- C. Mental health problems
- D. Neurology
- E. Musculoskeletal

RECOGNISED BY MEDICAL EXPERTS/STATE AUTHORITY

- Balneotherapy (healing waters, healing peloids, healing gases)
- Klimatotherapy (climatic conditions mountain, caves, forest) •
- Physiotherapy Ergotherapy Physiatric treatments as thermotherapy,
- mechanotherapy, elektrotherapy, hydrotherapy, lightherapy
- Psychotherapy Speach therapy Dietotherapy Health education







Long-Covid program at Domaine Thermal Mondorf, Luxembourg

from summer 2021 pilot project, January 2022 official program of the national heath insurance

Duration of the program: 3 weeks with treatments from Monday to Friday: 15 days of treatment.

On average, each patient has 55 treatments (plus 3 doctor's appointments) in the 3 weeks, which corresponds to a daily treatment time of around 2.5 hours.

The program can be carried out on an outpatient or inpatient basis. The post-corona spa programs for inpatients are 21 days 100% financed by the STATE health insurance, 1.600€

The majority of patients start post-Covid treatment: More than 12 weeks after illness

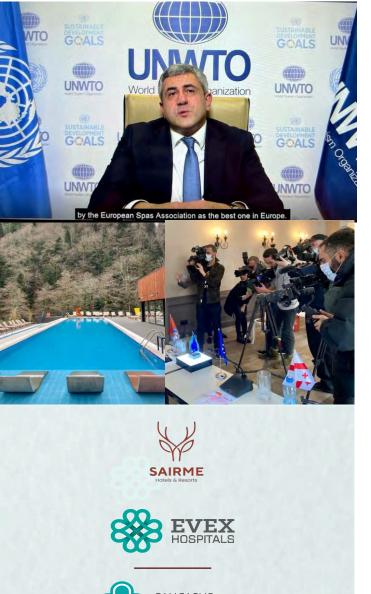
The first results are being analyzed by the National Service for Infectious Diseases but the results are not yet available.

Average treatment program:

- 3X doctor appointments
- 9X progressive endurance training on the cycloergometer
- 9X individual physiotherapy
- 6X group physiotherapy sessions (max 8 persons)
- 12X thermal treatments (mud, baths, massages)
- 9X inhalation and respiratory therapy
- 2X psychological consultation
- 2X Nutritional Consultation
- 6X smell training

At the end of the cure, a multidisciplinary report is drawn up.





REHABILITATION

HEALTH AFTER COVID

Treatment at Post COVID Health Center includes a course of rehabilitation at Georgian health resort

The Center provides complete laboratory, instrumental diagnosis and timely detection and treatment of any possible disorders caused by infection in one area. For the first time in Georgia, Post COVID Health Center of the Caucasus Medical Center and Sairme Resort offer a rehabilitation course after Covid. The combination of properly selected Balneological and medical treatments completely restores the state of health. Balneotherapy is one of the most effective means of rehabilitation in after Covid period. It helps restore the microcirculation in the body, which is most impaired as a result of Covid infection. Balneological treatments are important for improving blood circulation in the body, as a result of which all organs and tissues are better supplied with oxygen or nutrients and toxins are expelled.

CURATIVE AND WELLNESS PROCEDURES:
MINERAL BATH WITH EXTRACTS, UNDERWATER MASSAGE,
HALOTHERAPY, MINERAL WATER INHALATION,
HYDROCOLONOTHERAPY, MASSAGE THERAPY,
FITNESS ROOM, DRY AND STEAM SAUNA
CONSULTATION AND SUPERVISION OF A GENERAL PRACTITIONER

100-200 Euro /week
Not paid for by health insurance, but for all healthcare workers
The majority of patients start post-Covid treatment: 4 to 12 weeks after illness



OCCUPATIONAL RETRAINING IN PACIENTS POST SARS-COV-2 INFECTION



- proper rehabilitation interventions to help active people to recover after post-acute sequelae of SARS-CoV-2 infection (fatigue, musculoskeletal pain, anxiety and depression mainly)
- observational study including 18 actives, employed subjects, aged 35- 60 years, referred to rehabilitation department for musculoskeletal pain and dysfunction which interfere with the capacity to perform occupational tasks and to return to active work
- Back pain was present in all patients, neck and low back pain mainly, comorbidities in 7 patients (33,88%), spine misalignment in 16 patients (88,88%), protective posture with thoracic kyphosis and rounded shoulders, muscle contracture in neck muscles, upper trapezius, pectoralis, lumbar muscles, severe locomotor dysfunction in 2 patients (11,11%), falls in 3 patients (16,66%) sleep disturbances, fatigue, anxiety and depression signs in most of the patients.
- Rehabilitation techniques consisted of: massage (relaxation and myofascial release techniques), electrotherapy, relaxation techniques and exercises adapted after effort tolerance

RESULTS

• By rehabilitation treatment a better sleep, lower level of fatigue, better exercises tolerance was obtained, 8 patients (44.44%) being able to return to work.

The pulmonary rehabilitation program consists of three phases







Initial examination

Spirometry
Oximetry
Walking stress test
Kinesiological analysis

Treatment program in three-week blocks

21 spa treatments per week with the focus on respiratory physiotherapy

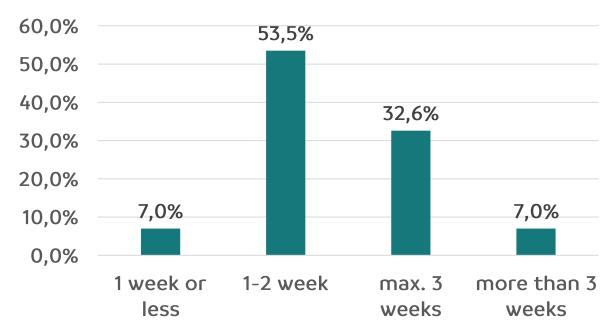
Final examination

Spirometry
Oximetry
Walking stress test
Kinesiological analysis

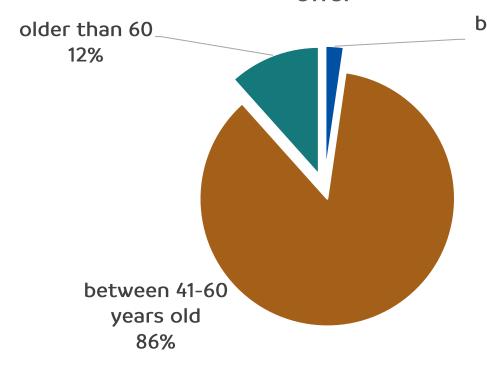
The post-COVID program started 46,5% 50,0% 44,2% 40,0% 30,0% 20,0% 10,0% 4,7% 2,3% 0,0% 1 month 2-5 months 6-12 more than 1 months year ago ago ago ago

Basic information about the post-COVID programs

Duration of stay for patients / days of treatments:

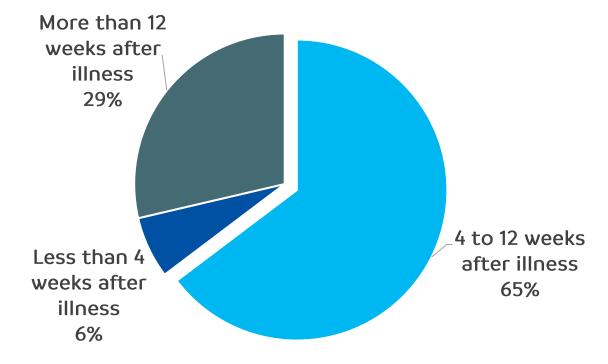


Age structure of the patients by post-COVID offer



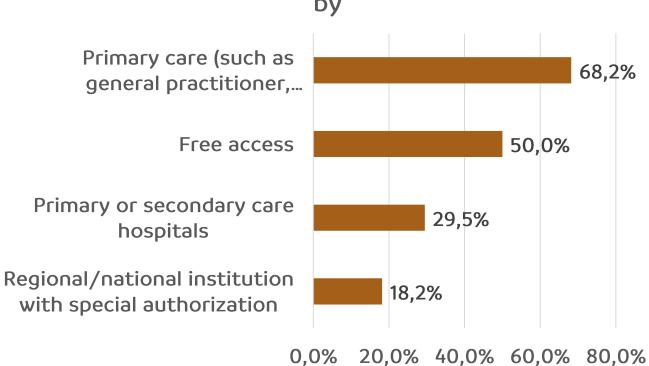
between 21-40 years old 2%

The majority of patients start post-Covid treatment:



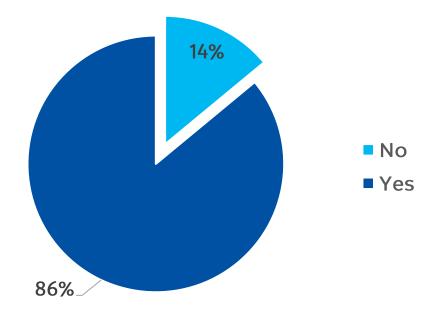
The majority of the respondents declare that medical spas/spa hotel is authorized by the Ministry of Health in the country.





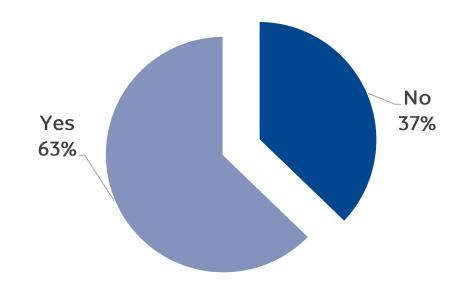


Are your medical spas/spa hotel authorized for this type of healthcare by national authority?

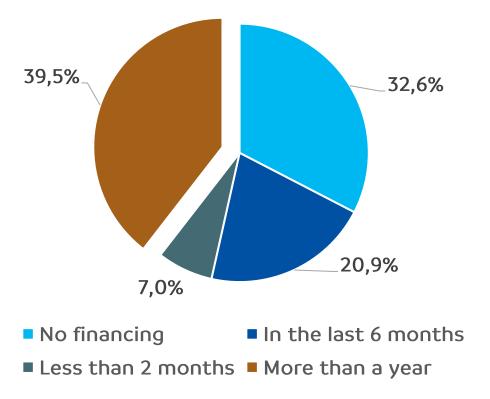


The government provides financial support/contribution for post-Covid patients in medical spas

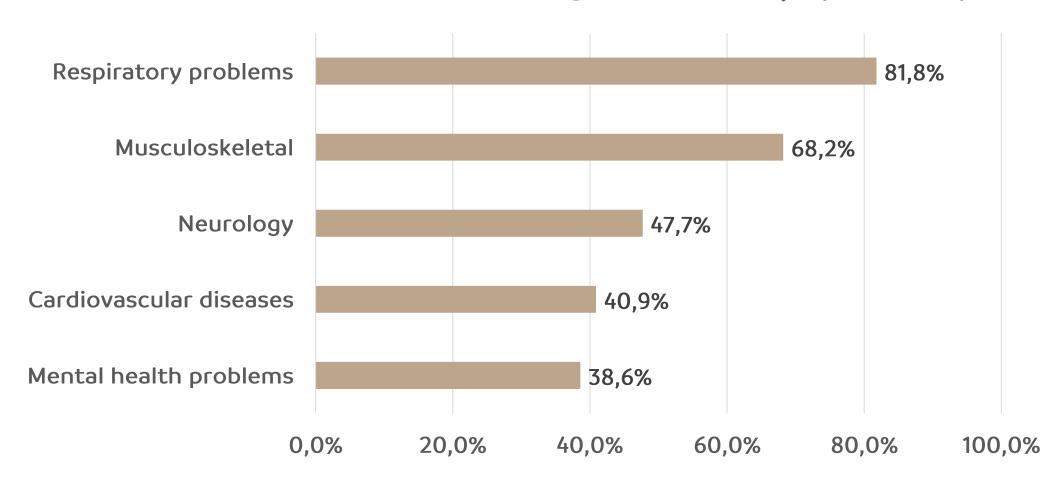
Basic financial information about the post-COVID programs



How long has been this financial subsidy for post-Covid cures existing?



The dominant symptoms of the patients treated in medical spa facility (N=42)



European Centre for Disease Prevention and Control COVID-19 data set:

| | Total= | | covid19 EU-27 hospital admissions till 202205 (may) excl UK |
|--|--|-------------|---|
| | Total EU population = | 447,000,000 | excluding UK |
| | => | | covid19 hospital admissions/total EU-27 population till 202205 |
| | | | long covid |
| | 10-25% long covid;10%= | | long covid patients in the EU-27 (data till 202205) |
| | 10-25% long covid;25%= | | long covid patients in the EU-27 (data till 202205) |
| | | | |
| | 70% Long covid have Concentration & memory problems @25%= | | 70% Long covid have Concentration & memory problems |
| | 70% Long covid have Concentration & memory problems @10%= | | 70% Long covid have Concentration & memory problems |

2022 - UK Cambridge University Covid19 research team mentions that

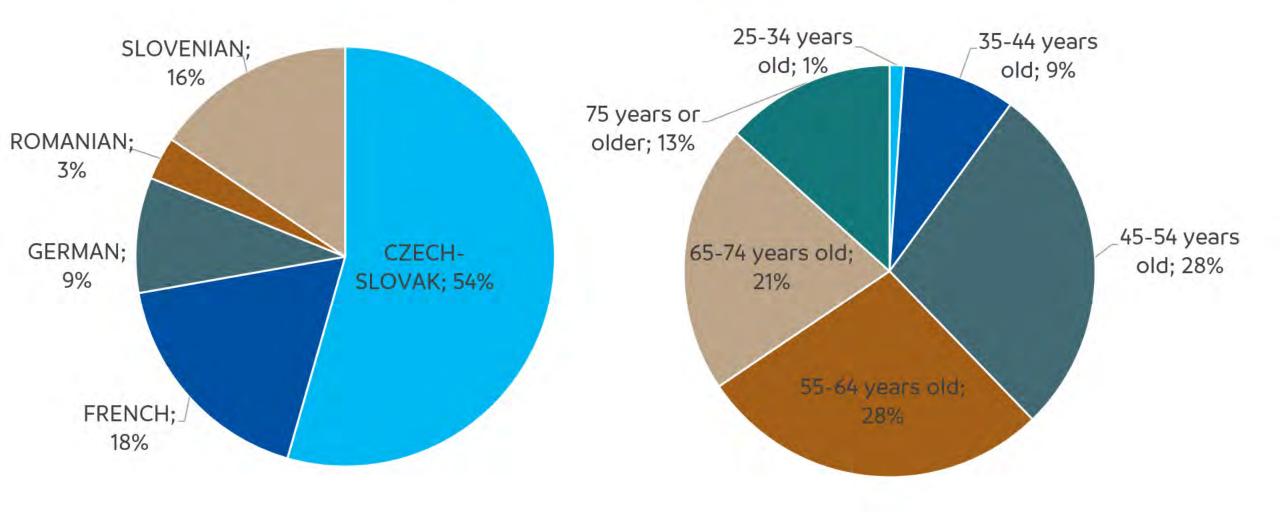
"Half of the Long Covid patients in the study reported difficulties in getting medical professionals to take their Memory and concentration problems symptoms seriously".

"Memory difficulties can significantly affect people's daily lives, including the ability to do their jobs properly."

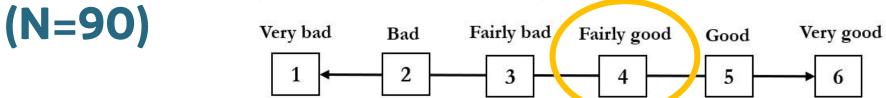
Basic results: patient's survey (N=90)

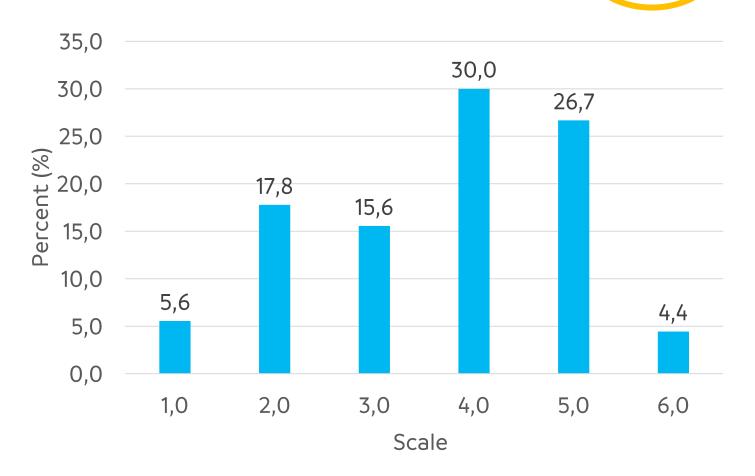






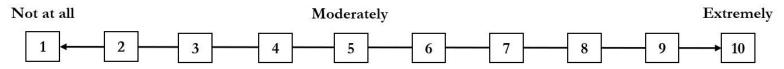
How would you describe your health in general?





| Mean | 3,678 | | |
|----------------|-------|--|--|
| Median | 4,0 | | |
| Std. Deviation | 1,314 | | |
| Variance | 1,726 | | |

The symptoms have disrupted your social life / leisure activities and work and family life (N=90)



| | Mean | Std. Deviation | Variance |
|--------------------------------------|--------------------|----------------|----------|
| Social life / leisure activities: | <mark>6,844</mark> | 2,643 | 6,987 |
| Work: | 6,314 | 3,167 | 10,030 |
| Family life / home responsibilities: | 6,467 | 2,678 | 7,173 |

The symptoms from COVID-19 moderately disrupted the patient's work and family life.

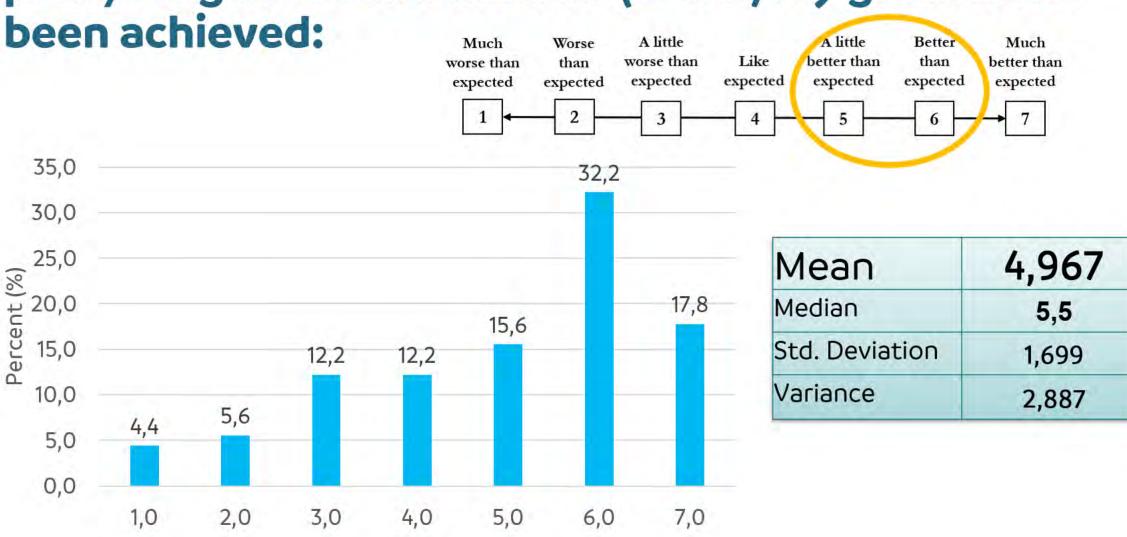
Their social life/leisure activities were mainly disrupted!

How much need for action do you see in the following areas of your quality of life? (N=90)

0 means that you see no need for action. A value of 10 means you see a maximum need for action.

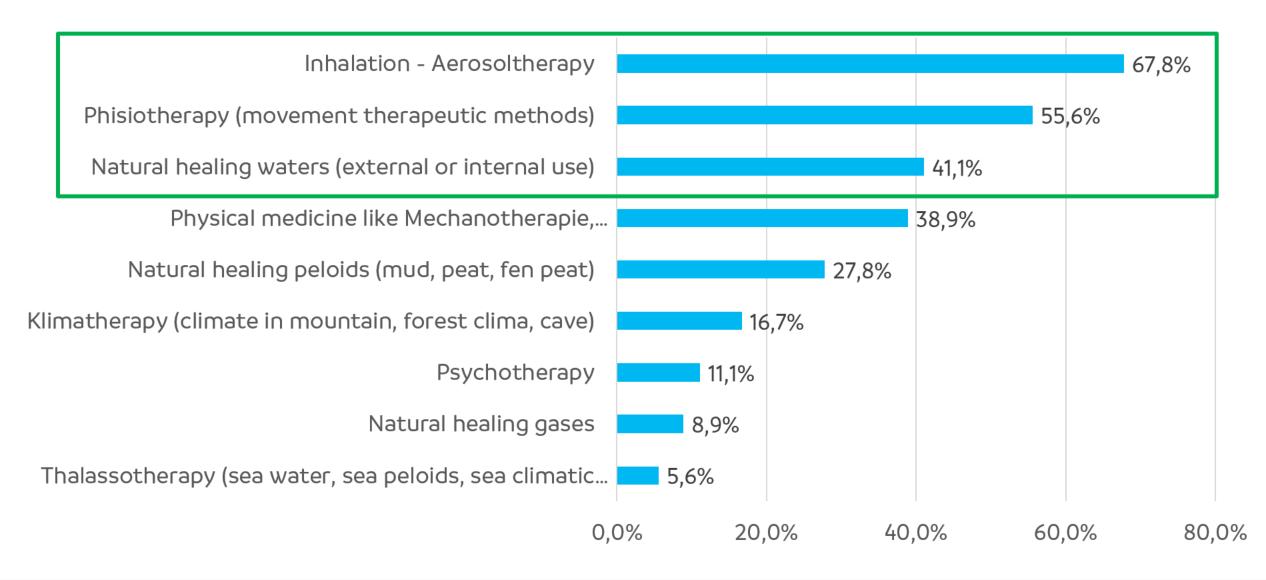
| Descriptive Statistics | | | | | | | | |
|------------------------|-------|--------|----------------|----------|--|--|--|--|
| | Mean | Median | Std. Deviation | Variance | | | | |
| My quality of life | 5,644 | 6,0 | 3,1384 | 9,850 | | | | |
| My well-being | 5,511 | 6,0 | 3,1667 | 10,028 | | | | |
| My efficiency | 5,444 | 6,0 | 3,2329 | 10,452 | | | | |
| My daily activities | 5,444 | 6,0 | 3,0247 | 9,149 | | | | |
| My mobility | 5,411 | 5,0 | 3,2078 | 10,290 | | | | |
| My pain | 5,144 | 5,5 | 3,3236 | 11,046 | | | | |
| My social contacts | 4,700 | 5,0 | 3,3097 | 10,954 | | | | |

How were your personal goals achieved through the post/long covid treatment? (N=90) My goals have



Scale

Which 3 (three) therapies do you feel the most effective in your post/long covid treatment? (N=90)



ESPA invites you to SLOVAKIA, Pieštany 21-23.SEPTEMBER 2022

to a spa island - masterpiece of Art Nouveau and with 100 years of expertise in health, regeneration, relaxation

- SPA-CE B2B Workshop for Spa Business and Travel agents-Hosted Buyer Program
- INNOVATION AWARDS
- International Press trip

More than 30 patient survey – is invited to the ESPA CONGRESS





26th Congress of THE EUROPEAN

SPAS ASSOCIATION

21-23 September 2022



SPACE

The 13th

SPA-CE Experience

The first and only boutique Spa & Wellness Workshop

20-23 September 2022