

Health Tourism and Physical Literacy: A Qualitative Exploration of Elderly Visitors' Experiences after Rehabilitation at Slovenian Health Resorts

Katja Kokot

University of Maribor, Slovenia
katja.kokot1@um.si

Maja Turnšek

University of Maribor, Slovenia
maja.turnsek@um.si

The promotion of physical literacy is an opportunity to multiply significant health benefits in an ageing society. In Slovenia, health resorts are one of the most common prime areas for health enhancement, offering numerous services for individuals to improve their health and forming an important pillar of the social tourism and healthcare sector. The aim of this research is to explore the role of medical rehabilitation at Slovene health resorts in the processes of increasing the physical literacy of their patients. Twenty-one semi-structured interviews were conducted with previous guests of Slovene health resorts who have undertaken medical rehabilitation. The analysis indicates that the most common approach is providing lectures about physical activity followed by group or individual physical regimes organised for patients with similar health concerns. These actions target two dimensions of physical literacy: the competence and the knowledge/understanding dimension. However, the eventual omission of prescribed physical activity following the rehabilitation is an issue concerning the motivation dimension of physical literacy, which should thus be addressed more in the future. The findings contribute to understanding the role of medical rehabilitation at Slovene health resorts by applying the physical literacy model for older adults. The study provides valuable insights regarding the long-term benefits of rehabilitation at the health resorts on individuals' level of physical literacy. The results are helpful for both the tourism and medical sectors.

Keywords: health resorts, physical literacy, health tourism, rehabilitation, health literacy, elderly



<https://doi.org/10.26493/2335-4194.15.81-94>

Introduction

As health resorts are an essential part of the Slovene tourist industry, and also owing to the ageing of the European population, it is essential to learn more about the future role health resorts may play in the active ageing process. According to Gerling et al. (2010), ageing affects the quality of life in three different ways:

cognitive impairments, a resulting decline in existing motor skills and a negative impact on motor learning of new skills. As of 2014, Slovenia was below the average of the Active Ageing Index for the European Union (UNECE & DG EMPL, 2015). As Europe's population is getting older, Slovenia faces a similar problem; for example, only 42% of Slovenes between 65 and 74

years do not have mobility problems, and only 26.1% aged 75 years or more (Ministrstvo za javno upravo Republike Slovenije, n.d.a). When creating physical exercise programmes for seniors, it is vital to address the fact that 54.5% of Slovenes aged 55 or more never exercise or play sport, and 50% do not even participate in light physical activity such as gardening (European Commission, 2018). The term 'physical literacy' describes the motivation, confidence, physical competence, knowledge, and understanding that individuals develop to maintain physical activity at an appropriate level throughout their lives (Whitehead, 2010). Physical activity has been consistently demonstrated to generate considerable health benefits, such as reducing the likelihood of cardiovascular disease, diabetes, and cancer (Warburton et al., 2006). Developing and maintaining physical literacy is consistent with the goal of healthy ageing and optimises opportunities for good health at all stages of life. Hence, the promotion of physical literacy has been identified as a pivotal opportunity to generate significant health benefits in adults (Almond, 2013). Furthermore, improving individuals' physical literacy may have the potential to reduce financial expenses in healthcare systems (Wang et al., 2005).

Health resorts are suitable locations for physical literacy improvement during medical rehabilitation. In addition, a thermal environment is an optimal place for promoting health education and patients' well-being in a comfortable setting. Many countries in the EU, including Slovenia, have already emphasised the potential health resorts have for active ageing of the local community (Blain et al., 2016; Lindner et al., 2021). In Slovenia, certified health resorts are not only part of the economic sector but also part of the public healthcare sector. Therefore, health resorts have a potentially significant role in increasing the physical literacy of the older Slovene population, predominantly through publicly financed rehabilitation treatment. However, research surrounding the question of whether rehabilitation services and the corresponding information exchange with medical personnel influence the level of physical literacy among the visitors has not yet been conducted. Furthermore, researching physical literacy in the health tourism sector can offer great potential

regarding the necessary innovative changes in future offers of the health resorts.

Combining the Tourism Industry with the Public Health Care Sector

According to Mueller and Kaufmann (2001), health tourism is the sum of relations and phenomena resulting from the change of location and stay of people, undertaken to provide support, achieve balance, and restore physical, mental, and social comfort through the use of health services. For this research, the definition proposed by Rulle (2004, p. 20) is the most suitable: 'This form of tourism is characterised by the aspect of health. The restoration or maintenance of personal health is in the foreground. The decision to take the journey may be influenced by constraints such as illness or the need for rehabilitation or by a doctor's recommendation.' Health resort therapy involves all medical activities originating and employed in health resorts and aims at health promotion, prevention, therapy, and rehabilitation (Gutenbrunner et al., 2010). Rehabilitation can be defined as 'a set of interventions designed to optimise functioning and reduce disability in individuals with health conditions in interaction with their environment' (World Health Organization, 2021). The medical treatment in health resorts combines the effect of natural healing resources with medical care to facilitate the rehabilitation process.

In Slovenia, health resorts offer treatments that use the healing effects of thermal waters and mineral waters, followed by seawater and brine, aerosols for inhalation, healing muds and mineral peloids, peat, and the different micro-climates (Horvat, 2014). Certified health resorts are part of the healthcare sector as the Health Insurance Institute of Slovenia enables and covers medical rehabilitation expenses. A similar funding mechanism is also present in other European countries with a strong health tourism sector such as Poland (Woźniak-Holecka et al., 2017), Germany (Pforr & Locher, 2013), Romania (Surugiu et al., 2020), the Czech Republic (Attl & Čertík, 2011) and Slovakia (Derco, 2014). The Health Insurance Institute of Slovenia often covers the cost of overnights and food for a particular number of Slovene residents, which is regulated yearly.

In the year 2017, Slovene health resorts realised rehabilitations that totalled 351,960 overnights (Skupnost slovenskih naravnih zdravilišč, 2018) with an average duration of the total stay of 15.1 days (Ministrstvo za javno upravo Republike Slovenije, n.d.b), which is 11.4% of all overnights in Slovene health resorts (Skupnost slovenskih naravnih zdravilišč, 2018). Medical rehabilitation is an important segment of Slovene health resorts due to financial benefits; for example, Thermana Laško, one of the oldest health resorts in Slovenia, generated 35.76% revenue from sales due to the contract with the Health Insurance Institute of Slovenia in 2019 (Thermana Laško, 2020).

Physical Literacy and Health Resorts

Physical literacy has become an increasingly influential concept in the past few decades and is woven into education, sport, and recreation policy and practice. Whitehead (2013, p. 29) proposed the definition of physical literacy as ‘the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for maintaining purposeful pursuits/activities throughout the life course.’ According to Whitehead (2010), the concept of physical literacy can be depicted by six dimensions: (1) motivation (desire to be active and to persist with the activity), (2) competence (movement capabilities), (3) environment (having an appropriate everyday setting), (4) sense of the self (perceives oneself as a physically active person with appropriate experience), (5) expression and interaction (being capable of fluent self-expression and empathic listening to others about and through physical activity) and (6) knowledge and understanding (regarding all other above dimensions, and including a clear understanding of the benefits of physical movement regarding the quality of life).

In the literature, physical literacy itself is frequently seen as the outcome or endpoint, with a primary focus on fundamental movement skills in school-age children, rather than as a unique and individual process that evolves across the life course as conceived initially by Whitehead (2013) (Young et al., 2020). Most articles pertaining to physical literacy in the scientific literature have shared information relative to the sectors of youth sports and childhood education (Roetert &

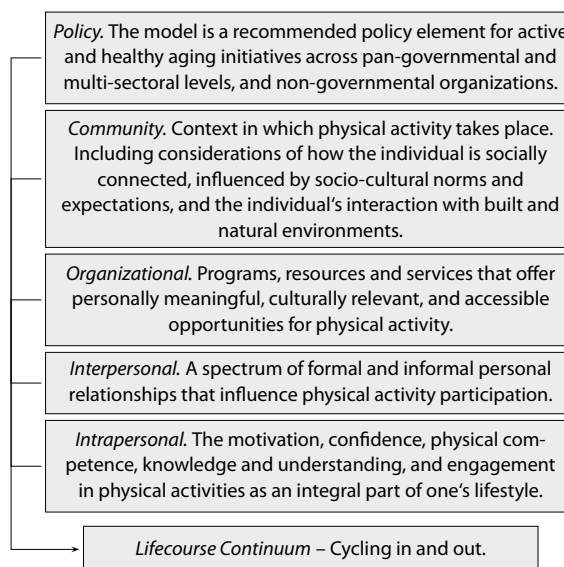


Figure 1 Physical Literacy Model for Older Adults (adapted from Jones et al., 2018, p. 10)

Ortega, 2019). Thus far, physical literacy has not been extensively investigated among the older adult population, and consequently, older adults are often an overlooked audience of the programmes that promote physical literacy. From a physical literacy perspective, successful agers compensate and modify their activity by optimising choices, thereby maximising success and maintaining higher levels of functioning across all dimensions (Roetert & Ortega, 2019). A physical literacy model for older adults (see Figure 1) has been developed by Jones et al. (2018), pointing to the need to adapt the intrapersonal, interpersonal, organisational, community and policy elements to the specifics of the older adult population (Jones et al., 2018, see Figure 1). The model is one of the few that take into account the individual or organisational level and approaches the issue of physical literacy of older adults from a broader holistic perspective, also incorporating the community and national policy level. While this is primarily a theoretical model developed for the whole range of elderly experience and social context, it is a useful analytical tool for analysing and providing recommendations about the role of health resorts in improving the physical literacy of their elderly patients.

A limited amount of research has investigated the role of health resorts in increasing the physical literacy of their elderly patients. Stevens et al. (2014) reported that physical activity counselling and prescriptions delivered in the health care setting are more effective if they include an assessment of individual needs, motivation and preferences and if social supports are available. A study in French health resorts (Maitre et al., 2017) investigated the level of physical activity after three weeks of thermal treatment with additional physical education sessions. The main results indicated that the participants' volume of physical activity was significantly higher at two weeks, two months, six months, and one year after the end of their active thermal treatment than their baseline level. Even one year after the end of the thermal healthcare, 64% of the participants still had a higher volume of physical activity than at baseline. The participants improved their physical fitness components (i.e. BMI, flexibility), psychological parameters (i.e. global self-esteem, physical self-worth, intrinsic motivation, and mood states) and the intrinsic regulation of exercise behaviour. It is likely that the physical and psychological status of participants at the end of the intervention was better and may further support their engagement in an active lifestyle (Kamioka et al., 2006; Kamioka et al., 2009; Zijlstra et al., 2005). The study by Maitre et al. (2017) implies that combining physical education sessions with thermal treatment could positively and longitudinally affect the levels of physical activity of patients and consequently could serve as an example for implementing such activities in the rehabilitation process. Previous research by Carpentier and Satger (2009) similarly stresses that balneotherapy treatments combined with educative workshops impact patients' quality of life in the long term. However, the study from Gay et al. (2020) showed a limited effect of a self-management exercise programme when added to spa therapy for increasing physical activity in patients.

These previous studies, however, were limited, all focused on quantitative assessment of the effect, either with self-administered questionnaires and/or physical fitness tests (measuring BMI, walk test, and other physical measures/exercises). Still missing are qualita-

tive, phenomenological insights into the participants' experiences and memory of the thermal treatment and their understanding of the longitudinal effects of the treatments. An in-depth understanding of these experiences is a valuable input regarding testing and improving the physical literacy model for older adults for health resorts.

Considering these facts, it is necessary to research this issue; therefore, the main objective of the research is to explore the personal experiences of patients who have previously undertaken medical rehabilitation at a health resort, focusing on the health resort services that affect their physical literacy levels. The analysis will serve for future research as it is anticipated that health resorts will have a prominent role in post-pandemic times, as the COVID-19 pandemic will change the role of health resorts, strengthening their preventive, therapeutic, rehabilitative, educative, and social role (Masiero & Maccarone, 2021).

Methodology

In order to understand the experiences of rehabilitation patients in Slovene health resorts, we employed semi-structured interviews with 21 previous guests of Slovene health resorts. The condition was that they had undertaken at least one medical rehabilitation in the last four years. The interviews were conducted in June and July 2020. Snowball sampling or chain-referral sampling was used to identify potential subjects. The sample consists of 7 males and 14 females, primarily seniors, that have stayed at a total of 11 out of 14 accredited Slovene health resorts, either once or multiple times. Detailed information about the sample is presented in Table 1.

All the interviewees stayed at the health resort hotels during rehabilitation, and most of them stayed there for 14 days. The description of the average day spent at the health resort did not vastly differ among the interviewees.

The interviews included questions about the stay at the health resorts (health condition, duration, time of stay), description of their stay (daily routine at the health resort, medical treatments carried out, accommodation and amenities), satisfaction with the health resort (amenities and personal) and still-memorised

Table 1 Sample Characteristics

(1) Thermal resort	Health problems
A Ptuj Thermal Spa	Leg fracture
B Olimia Podčetrtek Thermal Spa Dolenjske Toplice Thermal Spa Šmarješke Toplice Thermal Spa	Spine surgery Hip replacement
C Terme Zreče	Leg fracture
D Čatež Thermal Spa	Knee surgery
E Čatež Thermal Spa Thermana Laško	Knee surgery Hip replacement
F Terme 3000 Moravske Toplice	Spine surgery
G Radenci Thermal Spa	Heart surgery
H Ptuj Thermal Spa	Spine surgery
I Terme Zreče	Leg fracture
J Terme Zreče Talasno Strunjan	Spine surgery Arthritis
K Ptuj Thermal Spa	Leg fracture
L Terme 3000 Moravske Toplice	Spine surgery
M Terme Zreče Terme 3000 Moravske Toplice Radenci Thermal Spa	Knee surgery Hip replacement Heart surgery
N Terme Zreče	Knee surgery
O Čatež Thermal Spa	Knee surgery
P Dolenjske Toplice Thermal Spa	Hip replacement
Q Ptuj Thermal Spa	Hip replacement
R Olimia Podčetrtek Thermal Spa Terme 3000 Moravske Toplice Radenci Thermal Spa	Knee surgery Spine surgery
S Terme Zreče Thermana Laško	Aseptic necrosis
T Medical center Rogaška Ptuj Thermal Spa	Colorectal surgery Spine surgery
U Terme 3000 Moravske Toplice	Arthritis

Notes (1) Interviewee.

received information about their health condition (knowledge, daily routine, and restrictions at home).

A suitable method for analysing the transcripts seemed to be thematic qualitative content analysis (Mayring, 2014). For the present qualitative content analysis, structuring and filtering the relevant content out of the material as a whole and analysing it re-

garding the categories specified in advance (thematic blocs) seemed to be the most appropriate way. Defining the categories serves to filter the interviews for statements fitting into the categories. The categories were developed inductively, guided by the conducted data. For qualitative content analysis, Atlas.ti 8 computer software was used, which is commonly used for coding and analysing transcripts. In the discussion, each quotation is labelled with a letter that indicates the interviewee.

Results and Discussion

The findings from the transcript analysis and corresponding discussion are divided into three parts following the natural narrative progression of the participants' stories: experiences before the rehabilitation, experiences during the rehabilitation, and physical experiences after the rehabilitation. The discussion of the results in this section interconnects the findings with Jones et al.'s (2018) physical literacy model for older adults to provide recommendations for further development of health resorts as an active partner in the societal striving for increasing physical literacy of the elderly.

Experiences before the Rehabilitation

The majority of the interviewees have undergone medical rehabilitation as part of the post-surgical programme of re-establishing joint motion, developing muscle strength and restoring joint function. Many have had prescribed sessions with physiotherapists before undergoing rehabilitation at the health resort; however, they preferred the treatment at the health resort: 'After the surgery, before I went to the spa, I had eight sessions with the physiotherapist in the health centre. [...] However, they show you more exercises at the spa; everything is more holistic I would say, better definitely.' (L)

Health literacy is a concept connected to an individual's responsibility to understand and act on health information in everyday environments (Sørensen et al., 2012). It is perceived as one of the significant components in the preparations of individuals in taking responsibility for their health. Although the terms physical and health literacy differ in their focus, develop-

ing literacy skills is key in ensuring that individuals have the skills to adopt a healthy lifestyle. The analysis has indicated lower health literacy levels among the respondents as their knowledge about whether they have the right to rehabilitation at a health resort varies. Some do not know they are entitled to rehabilitation unless their physician mentions it to them: 'I do not know about these laws and if you are entitled or not. Even before, when I had my ovaries removed, I did not go anywhere. However, supposedly I was entitled to rehabilitation because I was talking with my doctor about the upcoming rehabilitation for my hip. She said that I should know how it is during the rehabilitation, and I told her that I have yet not been at any spa rehabilitation. And she was surprised by this fact.' (P) Limited health literacy is also shown through limited knowledge about the procedures of the medical commission, which is responsible for the assessment of people's applications for rehabilitation at health resorts: 'When I had a hip replacement, my surgeon wrote that he advises rehabilitation in Terme 3000 thermal spa, which was written in my report. But I got the rehabilitation at Thermana Laško. When I came back, my surgeon was angry about why I went there if he advised another spa. I said that Laško is what I got. And when I had knee surgery, my surgeon advised that I go to Čatež Thermal Spa, and I again got Thermana Laško. And then I thought that something was not right. I called the commission to ask why they would not send me to the spa that the surgeon advised. Then I got the instructions on how to write the complaint. So, I sent a complaint and got Čatež Thermal Spa as I should have at the beginning.' (E)

Experiences during the Rehabilitation

Physical literacy is arguably an antecedent of physical activity, while also being developed through physical activity (Giblin et al., 2014). Physical exercises during rehabilitation are crucial in affecting physical literacy levels. However, the physical exercises at the health resort are adapted to the patients' physical, cognitive, and sensory limitations. Adapted physical activity was executed daily by participating in the obligatory group exercises in the thermal pool or the gym supervised by the head physician. The medical personnel not only

demonstrate the exercise but also supervise the execution and warn about possible injuries: 'In the morning, from nine to twelve, there are also physiotherapists with you that show you how to correctly perform the exercises, and they always warn you if you are doing something wrong. Your every move is supervised, basically.' (N)

Depending on their health condition, some of the interviewees had individualised physical regimes with the physiotherapists, which was generally seen as beneficial for their rehabilitation process: 'When you arrive, you get your therapist for the entire period. I had a young woman; we had already become colleagues in those fourteen days, and we were able to talk about everything in a completely relaxed way. I find this better than having a different physiotherapist every day.' (C)

Medical personnel at the health resort often strongly advise the patients to perform the physical exercises in their free time at the health resort as well: 'In the afternoon we had individual exercises. Everything that we did in the morning, we had to repeat in the afternoon alone; there was no physiotherapist to guide us. One of them was there on duty, usually the head of physiotherapy, and he sometimes came to see us, but we were mainly alone. Usually, I was there from four to seven in the evening. So, I was in the gymnasium or fitness until seven p.m.' (D) The aim is thus that the patients take advantage of the infrastructure and strive for regular physical exercise to become a part of the patients' lifestyle as it is expected that after repetitive exercise, patients realise its importance not only for rehabilitation but overall health as well.

After the medical treatments, which usually occur in the morning, the patients have free time to schedule as they will. The analysis indicates that most patients try to remain active in their free time by being active in the natural environment or using other services available to hotel guests: 'There I went on short hikes several times. Every day probably. I have borrowed the poles for Nordic walking there.' (B) Previous research has shown that visitors with improved health as an expected benefit are more likely to engage in such activities (Koh et al., 2010; Kucukusta et al., 2013). We might stipulate here that the expected health benefits were also the main motivational factor for their activ-

ity in their free time. However, the interpersonal context seemed to have played the most important role here.

It is important to stress that the patients who had many social contacts during their rehabilitation were more likely to engage in physical exercise in their free time. This confirms previous research conclusions that social capital has an important impact on the physical activity of older adults (Chen et al., 2019): 'I had free time in the afternoon, but luckily, I found a group of women, my roommate among them, and we always went to the pool in the afternoon, and we always did additional exercises in the pool.' (P)

One of the processes of increasing the physical literacy levels of the patients is also the lectures organised for all rehabilitation patients. Patients see these lectures as educative and the information as applicable in everyday life. Lectures cover vastly different topics, such as common medical procedures, healthy diet, medical conditions, and suitable exercise for the patients: 'There they tell which sports are most suitable for you, which sports are the biggest burden for knee joints, what they advise you to do, which sports are not advised, and so on.' (N) With these lectures, health resorts try to directly increase the physical literacy level of their patients; previous research has also indicated the efficiency of combining patient education with a spa treatment on the health status of the patients (Kamioka et al., 2006; Kamioka et al., 2009; Maitre et al., 2017; Zijlstra et al., 2005).

All the patients stated that they received an exercise programme at the spa with the most suitable exercises to perform at home: 'We always receive an exercise programme at the spa. A single paper, where all the exercises are written and shown with pictures as well, the ones that we should do at home.' (S) Medical personnel also provide information concerning everyday activities that are important for successful rehabilitation, especially about how patients should behave after rehabilitation: 'I could say that I learned at the health resort what and how I should do, how to stand up from the bed, how to lift things, which movements I can make, which I should avoid. [...] The physician had said that I should avoid the movements that do not make me feel well. And that I was not allowed to

lift things. And that I should avoid cycling, the most recommended is walking and the exercises they had given me.' (F)

Experiences after the Medical Rehabilitation

Analysis of the transcripts revealed that interviewees could be divided into two groups: those who continued with exercise, which has been adapted due to their health concerns, and those who omitted the exercise once the pain had receded. It is assumed that the first group already had high levels of physical literacy before the rehabilitation; however, their knowledge has expanded, which is visible by their appropriate modification of the exercises after the rehabilitation.

Patients are instructed to keep performing suitable physical exercise at home after leaving the health resort. Some interviewees, especially those that had recently returned from the health resorts or those that still endure pain due to their health condition, follow these instructions as they see how regular exercise benefits their health condition: 'The most I remember are the exercises, I still perform them, and this is visible on my muscle mass.' (N)

Alarming information is that quite a few interviewees have admitted neglecting the physical exercise, especially those whose rehabilitation took place a longer period ago: 'I must admit, and I think that the same things can be said for other people as well, that I do these exercises for maybe three weeks and then they go to oblivion.' (S) The reasons for discontinuing the physical exercise are usually lack of time, equipment, or motivation: 'I have many steps at work, and that is enough for me. [...] They have also advised going to fitness to perform the exercises, but I do not have money or time for it.' (D) These findings implicate that the motivation dimension did not develop to such an extent as it did for some patients, and the strength of the habit of physical exercise diminishes over time. While patients were staying at the health resort, they were engaging in physical exercise because it was expected of them; therefore, the rehabilitation served as external regulation. The environment also plays a vital role in continuing the exercises once the patients leave the resort as people at home usually do not have suitable equipment. Additionally, the home

environment is not as motivating as the healing environment at the health resort. It is, however, visible that the interviewees are aware of the need for performing the physical exercise and the benefits they would gain. Thus, the knowledge and understanding dimension has evolved during the rehabilitation: 'I am aware that I should perform these exercises as they specifically target the knee, but so far there is no need for this' (D).

The analysis revealed that pain could also be a motivator for starting to exercise again: 'When it strains me, then I exercise [...] Even if I go for a walk in the morning, it is a little better. Now, when I feel that it starts to hurt me again, I do some exercise, and it helps.' (D). In contrast, the absence of pain, which is the primary goal of medical rehabilitation, affects the continuance of physical activity as it was before the medical procedure: 'I am also a swimmer. Before the problems with my knee started, I went swimming every day for the last six years. I have really missed it. I couldn't go swimming for a long time. But I have to be careful now as I am not allowed to bend my legs; I must swim with straight legs. It was a little harder at first, but eventually, I got used to this.' (N)

Furthermore, the analysis revealed that only one health resort invites the patients to an additional medical examination after the rehabilitation. The purpose of this examination is the observance of their rehabilitation process over a more extended period. 'When you finish your rehabilitation, after one month, I think [...] I even had an appointment, you could go back there for a check-up [...] As I heard, they put you in one room, and then they force you to perform some exercises to see your improvement in comparison to the results when you first came there.' (E)

Many interviewees admitted that even though they discontinued the recommended physical exercise, they remained physically active in other ways. However, the choice of sports that they perform has changed due to their health condition: 'I also changed the sports activities, now I cycle and play tennis while previously I was playing basketball and football, but now these two are too straining for me.' (L) Encouraging is the fact that especially the people who have already been physically active before the rehabilitation continued this habit

and also included the new exercises that they received at the health resort and incorporated them into their daily exercise regime that targets other parts of the body: 'I have also been previously going to the workout for osteoporosis and coronary diseases, so I not do only exercises for the knee but also for the upper part of the body. I try to combine these exercises in the way I feel it has the most positive effect on my condition.' (O) This behaviour indicates the high levels of physical literacy among some patients. For the execution of combining different exercises, high levels of almost all dimensions of health literacy are needed, especially the high-level competence and well-established sense of self.

Limitations

The first limitation of the study is the reflection of the small sample and a snowball sampling technique. Secondly, due to the characteristics of the sample, which consisted mainly of older adults that have undertaken medical rehabilitation at the health resort, the findings and proposed improvements may be relevant only to this particular population. Additionally, most of the patients of the health resorts do not have high medical knowledge levels, which may reflect the biased opinions, which could have been expressed in the interviewees.

During the time of the research, the Slovene tourism industry was significantly impacted by the COVID-19 crisis. Consequently, there might also be a limitation in the potentially greater focus of the interviewees towards more socially desirable answers in the form of expressing one's concern for health and physical activity due to the general concern over health in the COVID-19 crisis. Future research should consider how these trends will shift and the role of interpersonal influence, for example, via focus groups in specific health resorts, which was prevented due to current COVID-19 measures.

Future Recommendations and Research

Encompassing all findings from this study, the physical literacy model for older adults was applied to the case of medical rehabilitation at Slovenian health resorts (see Figure 2). As rehabilitation at the health

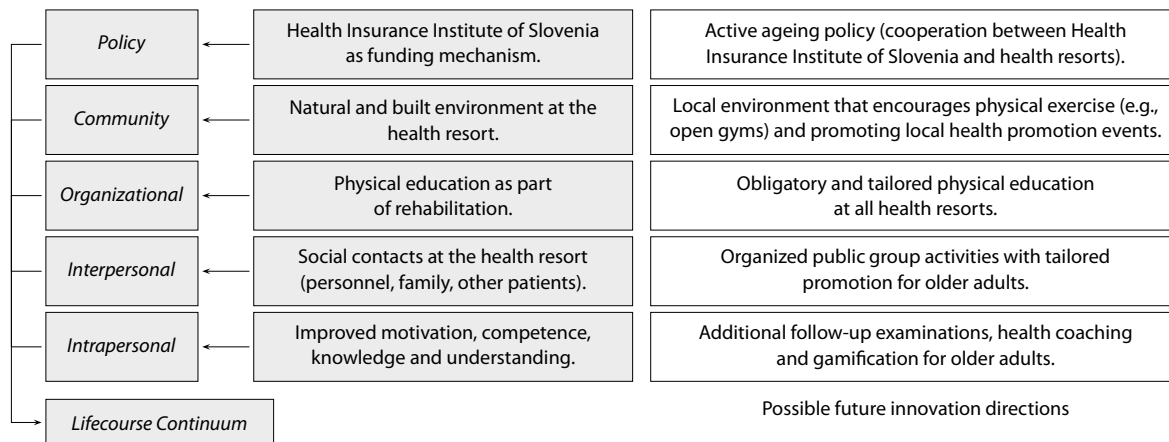


Figure 2 Physical Literacy Model for Older Adults by Jones et al. (2018) Applied to the Rehabilitation Processes at Slovene Health Resorts

resort is not enough to improve physical literacy, it is crucial to highlight possible solutions for positive long-term benefits after the rehabilitation experience. This issue should be the objective of interjoining the efforts of stakeholders from the tourism, healthcare and local development sector. Innovative solutions that will target the implementing of exercise in daily habits, taking into consideration the difficulties of the older generation, are needed. Here we discuss five interrelated areas connected to the domains of the physical literacy model for older adults for the future of innovative development of health resorts in collaboration with the public health care system and local governance.

First, intrapersonal elements of the model are related to the definition of physical literacy by Whitehead (2010). The analysis of transcripts indicates that, primarily, the competence dimension of physical literacy is targeted as patients learn, practice, and participate in physical activities that are beneficial for their rehabilitation, and additionally, the participants receive information about suitable exercise and sports options. The educational lectures also target the motivation and understanding dimension since the benefits of physical exercise are heavily implied (Whitehead, 2010).

The fact that many interviewees gradually omitted their physical activities in their everyday lives repre-

sents an important challenge to further target the motivation dimension of physical literacy. As patients, the interviewees saw physical exercise as an obligation as part of the rehabilitation process. At the health resort, it was associated with a part of the routine prescribed by a physician, and there was a strong social element to participation. In contrast, physical activity at home was seen as a work or personal care experience, and there were various negotiating constraints.

A possible solution for extending the motivation that could lead to implementing an exercise habit is additional follow-up examinations that would inform the person about the results of their rehabilitation. If the participation in this examination was somewhat connected to the additional offer of the health resorts (for example, a short package including some therapies), the health tourism industry would benefit from this as well.

A possible future solution is also the introduction of extensive health coaching otherwise used to promote healthy behaviour and achieve health-related goals (Palmer et al., 2003). Health coaching can be used in both a rehabilitative (Kivelä et al., 2014; Dejonghe et al., 2017) and preventive setting (Olsen & Nesbitt, 2010). Some patients expressed satisfaction with individual physical regimes, especially when the same therapist supervised them during the rehabilitation. Therefore, the individual approach is preferred

among the elderly population. Health coaching has also adapted to the digital era, meaning that the coaching is executed through mobile apps, often with the option for users to choose their health coaches based on personality matching and expertise from health coach biographies (Duscha et al., 2018) and supported by remote activity monitoring with technology solutions (Kitsiou et al., 2017). Tailoring coaching strategies is crucial for the long-term effect of coaching as many factors influence an individual's motivation (Beinema et al., 2021).

Another future direction is increasing intrinsic motivation via various elements of making the exercise a fun activity, such as gamification in the health tourism industry. Gamification reinforces and improves behaviours and user capacities, focusing on learning and health (Kasurinen & Knutas, 2018). In the context of digital health, gamification is typically employed in health and wellness apps related to self-management, disease prevention, medication adherence, medical education-related simulations, and some telehealth programmes. Gamification could positively affect health and well-being, especially when applied in a skilled way (Johnson et al., 2016), even on seniors (Koivisto & Malik, 2020; Martinho et al., 2020). Although gamification is a possible solution for engaging people in physical activity, it is important to adapt games to the older population's needs, the predominant segments of users at the health resorts (Gerling & Masuch, 2011).

Second, interpersonal elements that influence physical literacy are formal and informal personal relationships of the elderly population, both formed within the rehabilitation experience and before and after. Social benefits were a significant element for participants to engage in physical activity at the health resort during their free time. The majority of participants in this study were visiting health resorts with their family or friends or have developed a social relationship with other people also undertaking the rehabilitation.

Enjoyment and social interaction or enabling people to perceive their physical activity experiences as leisure might be the key to increasing participation in physical activity. Facilitating incidental physical activity associated with but not the focus of a pursuit

appears to be an essential dimension in achieving this (Sibson et al., 2010). Consequently, local and regional communities should further aim to provide multiple social gatherings that connect elders and at the same time incorporate physical activity tailored to their needs, such as public group exercises and organised hikes (Ward et al., 2020). Many associations organise such activities in Slovenia, yet the older population often does not know about these options, especially those with lower technological literacy levels. Therefore, the goal should be creating such activities and finding the right promotion channel to reach the desired audience. This could also be an opportunity to establish fruitful cooperations between health resorts, the healthcare system and local municipalities in a way that each partner provides suitable resources (for example, knowledge or financial resources).

Third, the organisational component of the medical rehabilitation at the health resort is the educational lectures organised for all the patients. Our findings currently indicate that some health resorts do not offer these lectures at all, while others provide lectures that cover vastly different topics. Some of them are targeted to the general public, and the provided information tends to be directly helpful for all the listeners, while others may not be helpful for all of the visitors even though it expands their general health knowledge (for example, a person with a skin disorder listening to a lecture about the replacement of heart valves). The solution to this issue could be changing the subject according to the current audience (such as content specifically designed for patients with locomotory problems) or putting more focus on content applicable for all guests (such as a healthy diet). Despite the fact that education is one of the basic services included in rehabilitation treatment, and as such, should be a mandatory component of any treatment, it is currently considered only as a supplement to the basic services. Therefore, medical treatment with a focus on health promotion might, and should be, a crucial component of the continuum of medical therapy (Gutenbrunner et al., 2010).

Fourth, community elements of the health resorts related to the physical literacy model for older adults are the built and natural environment. A healing and

easily accessible environment was a vital contributor to participating in physical activity during rehabilitation at the resort. The options for physical activity in the health resorts were accessible, and they were easy and convenient for people to use and engage in physical activity. The natural landscape and its developed components (i.e. availability of walking poles hire, use of walking paths, availability of walking tours) and their promotion at the health resort were all managed to encourage physical activity.

To extend the habits connected to physical exercise to the period after rehabilitation, the community-level government should focus on providing a local environment that encourages physical exercise, and is readily available and appropriate for older adults. Building open gyms and other similar facilities and health programmes that would be free for everybody could stimulate the older population to use these facilities. First, they would be close to their home, and second, usage does not mean any additional expenses. Additionally, such facilities are often already suitable for the needs of elders and allow them to adjust the intensity to their condition.

Finally, as medical rehabilitation is funded by the Health Insurance Institute of Slovenia, it is a vital, if not the most important, part of the policy domain of the physical literacy model. The findings of our study suggest that certain services that are part of medical rehabilitation at the health resort contribute to the higher physical literacy levels of the patients. However, this is not the primary goal of rehabilitation. While this system is beneficial and has existed in Slovenia for a long time, it is highly strained due to the larger share of the older population. Application of the procedures of curative medicine in the health system due to the lengthening of life expectancy might not be enough. For that reason, applying a wide range of health promotion activities on this basis appears to be an essential element of the national health policy to limit the risk of disease. Most importantly, health resorts might prove highly beneficial in the promotion of active ageing long before there is the need for curative medical rehabilitation – an area where the Health Insurance Institute of Slovenia and Slovenian health resorts should build strong cooperation in the future. An

important direction might be the new innovative approach of the so-called 'tourism coupons' introduced by the Slovenian Ministry of Economic Development and Technology as one of the measures for supporting the tourism industry at the time of the COVID-19 pandemic. In 2020, adult Slovenian citizens received 200 EUR coupons to spend at tourism facilities, health resorts included; in 2021, each adult was eligible for 100 EUR. Future analysis of the role of these coupons for Slovenian health resorts is needed.

Conclusion

Overall, this study provided many insights into the perception of rehabilitation at Slovene health resorts. The findings can be applicable to the field of health tourism and can be used in the medical and health-care fields of research. Furthermore, these results can also be applied to rehabilitation patients and self-paid services of health resorts (such as various health packages) as the target population does not vastly differentiate. The COVID-19 pandemic affected the perceived health-related risk of travelling (Turnšek et al., 2020) and caused redefining priorities of the population and highlighted health-related issues. The ongoing research by the Slovenian National Institute of Public Health shows that the COVID-19 pandemic negatively influences the daily physical activity of Slovene citizens (National Institute for Public Health, 2021). The findings of this research significantly contribute to the understanding of physical literacy, which will be more actual in the near future as individuals' physical literacy levels are crucial for establishing a healthy lifestyle.

This research, conducted qualitatively, provided insights into the phenomenon of medical rehabilitation at health resorts and its long-term effectiveness. Consequently, its findings could serve as the basis for creating a questionnaire as a quantitative method that would allow us to gather information from a large audience and perform statistical correlation analyses. Furthermore, to gain more insightful results about the researched phenomenon, a future study should further involve the longitudinal aspect, for example, via the diary study method, in order to gain more accurate information as in the present study, the accuracy of the results heavily relies on the memory of the guests.

The research has highlighted many open questions that should be addressed in the future. The first is how to secure the individualisation of physical education at the health resorts based on patients' health conditions. The current findings imply that some patients received information that cannot be applied in their everyday lives due to their health status. Additional research is needed to be able to fully understand the role and effect of the lectures received. Another open question has arisen after analysis of the transcript indicated that the patients' level of physical literacy before the rehabilitation might affect their physical activity after returning to the home environment. While this research has not measured their level of physical literacy before the rehabilitation, it would be suitable to include this measurement in future research to make more reliable conclusions. Finally, the role of the so-called 'tourism coupons' for the Slovenian health resort visitors should be analysed, and the study of their future implementation, with potential cooperation of the Health Insurance Institute of Slovenia.

References

- Almond, L. (2013). What is the value of physical literacy and why is physical literacy valuable? *Journal of Sport Science and Physical Education*, 65, 35–42.
- Attl, P., & Čertík, M. (2011). The financing of Czech spas with health insurance funds. In A. Kocourek (Ed.), *Proceedings of the 10th International Conference – Liberec Economic Forum 2011* (pp. 17–23). Technical University of Liberec.
- Beinema, T., op den Akker, H., van Velsen, L., & Hermens, H. (2021). Tailoring coaching strategies to users' motivation in a multi-agent health coaching application. *Computers in Human Behavior*, 121, 106787. <https://doi.org/10.1016/j.chb.2021.106787>
- Blain, H., Bernard, P. L., Canovas, G., Raffort, N., Desfour, H., Soriteau, L., Noguès, M., Camuzat, T., Mercier, J., Dupeyron, A., Quéré, I., Laffont, I., Hérisson, C., Solimene, H., & Bousquet, J. (2016). Combining balneotherapy and health promotion to promote active and healthy ageing: The Balaruc-MACVIA-LR® approach. *Ageing Clinical and Experimental Research*, 28(6), 1061–1065.
- Carpentier, P. H., & Satger, B. (2009). Randomised trial of balneotherapy associated with patient education in patients with advanced chronic venous insufficiency. *Journal of Vascular Surgery*, 49(1), 163–170.
- Chen, W. L., Zhang, C. G., Cui, Z. Y., Wang, J. Y., Zhao, J., Wang, J. W., Wang, X., & Yu, J. M. (2019). The impact of social capital on physical activity and nutrition in China: the mediating effect of health literacy. *BMC Public Health*, 19(1). <https://doi.org/10.1186/s12889-019-8037-x>
- Dejonghe, L. A. L., Becker, J., Froboese, I., & Schaller, A. (2017). Long-term effectiveness of health coaching in rehabilitation and prevention: A systematic review. *Patient education and counseling*, 100(9), 1643–1653.
- Derco, J. (2014). The Slovak spas in the light of the health care system. *Tourism Planning & Development*, 11(2), 243–252.
- Duscha, B. D., Piner, L. W., Patel, M. P., Craig, K. P., Brady, M., McGarrah 3rd, R. W., Chen, C., & Kraus, W. E. (2018). Effects of a 12-week mHealth program on peak VO₂ and physical activity patterns after completing cardiac rehabilitation: A randomised controlled trial. *American Heart Journal*, 199, 105–114.
- European Commission. (2018). Sport and physical activity: Slovenia. *Special Eurobarometer*, (472). <https://europa.eu/eurobarometer/api/deliverable/download/file?deliverableId=65334>
- Gay, C., Guiguet-Auclair, C., Coste, N., Boisseau, N., Gerbaud, L., Pereira, B., & Coudeyre, E. (2020). Limited effect of a self-management exercise program added to spa therapy for increasing physical activity in patients with knee osteoarthritis: A quasi-randomised controlled trial. *Annals of Physical and Rehabilitation Medicine*, 63(3), 181–188.
- Gerling, K. M., & Masuch, M. (2011). Exploring the potential of gamification among frail elderly persons. In *Proceedings of the CHI 2011 Workshop Gamification: Using game design elements in non-game contexts, May 7–12, 2011, Vancouver, BC, Canada*.
- Gerling, K. M., Schild, J., & Masuch, M. (2010). Exergame design for elderly users: the case study of SilverBalance. In *Proceedings of the 7th International Conference on Advances in Computer Entertainment Technology* (pp. 66–69). Association for Computing Machinery.
- Giblin, S., Collins, D., & Button, C. (2014). Physical literacy: Importance, assessment and future directions. *Sports Medicine*, 44(9), 1177–1184.
- Gutenbrunner, C., Bender, T., Cantista, P., & Karagülle, Z. (2010). A proposal for a worldwide definition of health resort medicine, balneology, medical hydrology and climatology. *International Journal of Biometeorology*, 54(5), 495–507.
- Horvat, U. (2014). Razvoj turizma v zdraviliških turističnih krajih v Sloveniji. In D. Cigale, B. Lampič, I. Potočnik

- Slavič & B. Repe (Eds.), *Geografsko raziskovanje turizma in rekreacije v Sloveniji* (pp. 47–66). Znanstvena založba Filozofske fakultete Univerze v Ljubljani.
- Johnson, D., Deterding, S., Kuhn, K. A., Staneva, A., Stoyanov, S., & Hides, L. (2016). Gamification for health and well-being: A systematic review of the literature. *Internet Interventions*, 6, 89–106.
- Jones, G. R., Stathokostas, L., Young, B. W., Wister, A. V., Chau, S., Clark, P., Duggan, M., Mitchell, D., & Nordland, P. (2018). Development of a physical literacy model for older adults – A consensus process by the collaborative working group on physical literacy for older Canadians. *BMC Geriatrics*, 18(1), 13. <https://doi.org/10.1186/s12877-017-0687-x>
- Kamioka, H., Nakamura, Y., Yazaki, T., Uebaba, K., Mutoh, Y., Okada, S., & Takahashi, M. (2006). Comprehensive health education combining hot spa bathing and lifestyle education in middle-aged and elderly women: One-year follow-up on randomised controlled trial of three-and six-month interventions. *Journal of Epidemiology*, 16(1), 35–44.
- Kamioka, H., Nakamura, Y., Okada, S., Kitayuguchi, J., Kamada, M., Honda, T., Matsui, Y., & Mutoh, Y. (2009). Effectiveness of comprehensive health education combining lifestyle education and hot spa bathing for male white-collar employees: A randomised controlled trial with 1-year follow-up. *Journal of Epidemiology*, 19(5), 219–230.
- Kasurinen, J., & Knutas, A. (2018). Publication trends in gamification: A systematic mapping study. *Computer Science Review*, 27, 33–44.
- Kitsiou, S., Thomas, M., Marai, G. E., Maglaveras, N., Kondos, G., Arena, R., & Gerber, B. (2017). Development of an innovative mHealth platform for remote physical activity monitoring and health coaching of cardiac rehabilitation patients. In *2017 IEEE EMBS International Conference on Biomedical & Health Informatics (BHI): 16-19 Feb. 2017* (pp. 133–136). IEEE.
- Kivelä, K., Elo, S., Kyngäs, H., & Kääriäinen, M. (2014). The effects of health coaching on adult patients with chronic diseases: A systematic review. *Patient Education and Counseling*, 97(2), 147–157.
- Koh, S., Yoo, J. J. E., & Boger, C. A. (2010). Importance-performance analysis with benefit segmentation of spa goers. *International Journal of Contemporary Hospitality Management*, 22(5), 718–735.
- Koivisto, J., & Malik, A. (2020). Gamification for older adults: A systematic literature review. *The Gerontologist*, 61(7), e360–e372.
- Kucukusta, D., Pang, L., & Chui, S., 2013. Inbound travelers' selection criteria for hotel spas in Hong Kong. *Journal of Travel & Tourism Marketing*, 30(6), 557–576.
- Lindner, S., Illing, K., Sommer, J., Krajnc-Nikolić, T., Harer, J., Kurre, C., Lautner, K., Hauser, M., Grabar, D., Graf-Stelzl, R., Korn, C., Pilz, K., Ritter, B., & Roller-Wirnsberger, R. (2021). Development of a Binational Framework for Active and Healthy Ageing (AHA) bridging Austria and Slovenia in a thermal spa region. *International Journal of Environmental Research and Public Health*, 18(2), 639. <https://doi.org/10.3390/ijerph18020639>
- Maitre, J., Guinhouya, B., Darrieutort, N., & Paillard, T. (2017). Physical education in a thermal spa resort to maintain an active lifestyle at home: A one-year self-controlled follow-up pilot study. *Evidence-Based Complementary and Alternative Medicine*, 1058419. <https://doi.org/10.1155/2017/1058419>
- Martinho, D., Carneiro, J., Corchado, J. M., & Marreiros, G. (2020). A systematic review of gamification techniques applied to elderly care. *Artificial Intelligence Review*, 53(7), 4863–4901.
- Masiero, S., & Maccarone, M. C. (2021). Health resort therapy interventions in the COVID-19 pandemic era: What next? *International Journal of Biometeorology*, 65(6), 1–3.
- Mayring, P. (2014). *Qualitative content analysis: Theoretical foundation, basic procedures and software solution*. <https://nbn-resolving.org/urn:nbn:de:0168-ss0ar-395173>
- Ministrstvo za javno upravo Republike Slovenije. (N.d.a). *Dolgotrajna oviranost po spolu in starosti, Slovenija, leto 2014*. Odprti podatki Slovenije. https://podatki.gov.si/dataset/nijz01ehis14-hs3?resource_id=cfbf022c-43f0-4771-9169-904c2125e8f6
- Ministrstvo za javno upravo Republike Slovenije. (N.d.b). *Število obravnav na rehabilitaciji, bolniških dni in povprečno trajanje hospitalizacij na obravnavah na rehabilitaciji, Slovenija, letno*. Odprti podatki Slovenije. https://podatki.gov.si/dataset/nijzreh_7
- Mueller, H., & Kaufmann, E. L. (2001). Wellness tourism: Market analysis of a special health tourism segment and implications for the hotel industry. *Journal of Vacation Marketing*, 7(1), 5–17.
- National Institute for Public Health. (2021). *Covid-19 pandemic in Slovenia: Results of a panel online survey on the impact of the pandemic on life (SI-PANDA); 7th wave*. https://www.nijz.si/sites/www.nijz.si/files/publikacije-datoteke/panda_7th_wave_eng_final_1.pdf
- Olsen, J. M., & Nesbitt, B. J. (2010). Health coaching to improve healthy lifestyle behaviors: An integrative review. *American Journal of Health Promotion*, 25(1), e1–e12.

- Palmer, S., Tubbs, I., & Whybrow, A. (2003). Health coaching to facilitate the promotion of healthy behaviour and achievement of health-related goals. *International Journal of Health Promotion and Education*, 41(3), 91–93.
- Pfarr, C., & Locher, C. (2013). Impacts of health policy on medical tourism in Germany. In C. M. Hall (Ed.), *Medical tourism: The ethics, regulation, and marketing of health mobility* (pp. 77–94). Routledge.
- Roetert, E. P., & Ortega, C. (2019). Physical literacy for the older adult. *Strength & Conditioning Journal*, 41(2), 89–99.
- Rulle, M. (2004). *Der Gesundheitstourismus in Europa: Entwicklungstendenzen und Diversifikationsstrategien*. Profil Verlag GmbH.
- Sibson, R., Scherrer, P., Ryan, M. M., Henley, N., & Sheridan, L. (2010). Is physical activity leisure or work? Exploring the leisure-tourism-physical activity relationship with holidaymakers on Rottneest Island, Western Australia. *Annals of Leisure Research*, 13(4), 652–678.
- Skupnost slovenskih naravnih zdravilišč. (2018). *Poročilo o poslovanju skupnosti slovenskih naravnih zdravilišč v letu 2017*. https://slovenia-spa.si/wp-content/uploads/2019/07/Ad2_Porocilo_o_poslovanju_Skupnosti_slovenskih_naravnih_zdravilisc_v_letu_2017_za_spletno_objavo.pdf
- Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., & Brand, H. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, 12, 80. <https://doi.org/10.1186/1471-2458-12-80>
- Stevens, Z., Barlow, C., Kendrick, D., Masud, D., Skelton, D. A., Dinan-Young, S., & Iliffe, S. (2014). Effectiveness of general practice-based physical activity promotion for older adults: systematic review. *Primary Health Care Research & Development*, 15(2), 190–201.
- Surugiu, C., Surugiu, M. R., & Mazilescu, R. (2020). Social insurance system influence on spa tourism: evidence for Romania. *Anatolia*, 32(1), 59–69.
- Thermana Laško. (2020). *Letno poročilo 2019*. https://www.thermana.si/public_resources_cache/files/original/original/51/5130/Thermana%20odd%20Letno%20porocilo%202019.pdf
- Turnšek, M., Brumen, B., Rangus, M., Gorenak, M., Mekinc, J., & Štuhec, T. L. (2020). Perceived threat of COVID-19 and future travel avoidance: Results from an early convenient sample in Slovenia. *Academica Turistica-Tourism and Innovation Journal*, 13(1), 3–19.
- UNECE & DG EMPL. (2015). *Active ageing index 2014: Analytical report*.
- Wang, F., McDonald, T., Reffitt, B., & Edington, D. W. (2005). BMI, physical activity, and health care utilisation/costs among Medicare retirees. *Obesity Research*, 13(8), 1450–1457.
- Warburton, D. E., Nicol, C. W., & Bredin, S. S. (2006). Health benefits of physical activity: The evidence. *CMAJ*, 174(6), 801–809.
- Ward, K., Pousette, A., & Pelletier, C. A. (2020). 'Not everybody's an athlete, but they certainly can move:' Facilitators of physical activity maintenance in older adults in a northern and rural setting. *Journal of Aging and Physical Activity*, 28(6), 854–863.
- Whitehead, M. (2010). *Physical literacy: Throughout the life-course*. Routledge.
- Whitehead, M. (2013). Definition of physical literacy and clarification of related issues. *ICSSPE Bulletin*, 65, 29–34.
- World Health Organization. (2021, November 10). *Rehabilitation*. <https://www.who.int/news-room/fact-sheets/detail/rehabilitation>
- Woźniak-Holecka, J., Romaniuk, P., Holecki, T., Frączkiewicz-Wronka, A., & Jaruga, S. (2017). Health promotion development in the spa treatment: Perspectives for the European countries learned from Poland's experiences. *Frontiers in Pharmacology*, 8, 29. <https://doi.org/10.3389/fphar.2017.00029>
- Young, L., O'Connor, J., & Alfrey, L. (2020). Physical literacy: A concept analysis. *Sport, Education and Society*, 25(8), 946–959.
- Zijlstra, T. R., van de Laar, M. A., Bernelot Moens, H. J., Taal, E., Zakraoui, L., & Rasker, J. J. (2005). Spa treatment for primary fibromyalgia syndrome: A combination of thalassotherapy, exercise and patient education improves symptoms and quality of life. *Rheumatology*, 44(4), 539–546.