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Karkonosze pro-mental health project

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Abstract

The 'Karkonosze pro-mental health' project is based on active tourism with a psychologist who uses psychological methods and techniques during hikes to restore the client's mental balance. This short communication is a report from the pilot stage of this project.

Keywords

Karkonosze, The Giant Mountains, Krkonoše, Sports Psychology, Tourism

An increasing number of publications are appearing annually which document the positive impact on maintaining and supporting mental health through a range of activities focused on physical activity. These activities fall into five categories: physical education, physiotherapy, recreation, sports and tourism [1]. This physical activity has been shown to result in enhanced physical fitness, which in turn has been identified as a contributing factor to overall health [2]. Prior research in the domain of physical education has predominantly centred on physical health. The positive physical effects have been emphasised many times through the construction of meanings and identities, coping with disabilities or impairments, the possibility of progress in sports, and the importance of active leisure [3]. To a lesser extent, research in physical education has focused on significant psychosomatic effects, such as stress relief, maintaining self-discipline, redirecting the urge to engage in bad habits towards competitive sports training, and the positive impact of sports on personality development [4]. However, a research gap remains concerning the support of mental health through physical

activity. The significance of promoting, maintaining and restoring mental well-being through physical culture is frequently overlooked [5].

The purpose of this short communication is to present the ‘Karkonosze pro-mental health’ project. The objective of the project is to deliver psychological support to athletes participating in hiking activities within the Karkonosze Mountains, a mid-sized mountain range on the Polish-Czech border, located in the Dolnośląskie Province in southwest Poland and in Liberecki and Hradecki Kraj in north-central Czech Republic. The Karkonosze trails are not demanding and range in altitude from 200 m to 1603 m above sea level. The psychological support component of the ‘Karkonosze pro-mental health’ project consists of active tourism with a psychologist who uses psychological methods and techniques during the hiking sessions to restore the client’s mental balance. The objective of this intervention is to exert a psychophysical impact on the client’s nervous system, thereby facilitating the resolution of their concerns through the medium of nature. As the participant traverses the designated trail, they are exposed to a variety of environmental influences, including varying landscapes, changes in atmospheric pressure, air density, oxygen partial pressure, air composition, solar radiation, air ionisation, and air humidity. The psychological influences, in contrast, pertain to the client’s interaction with the psychologist. The objective is to enhance the client’s comprehension and awareness of their own needs, concerns, fears and expectations. These dialogues facilitate a more comprehensive understanding of the client’s challenges, leading to the identification of hitherto unexplored coping mechanisms. In summary: the ‘Karkonosze pro-mental health’ project is a process in which the client can take a closer look at their own problems and recognise their impact on the adversities that arise. The overarching objective of the programme is to enhance the client’s overall life satisfaction and sense of fulfilment.

To date, two individuals have voluntarily participated in the project: one karateka who had experienced a severe crisis, and the other a swimmer who was overwhelmed by stress. They engaged in individualised sessions with the researchers during the summer months, with each session focusing on a specific route. Significant positive changes in the behavioural, cognitive, emotional and physical spheres were noted, restoring clients to a state of mental equilibrium. In the case of the karateka, these changes were observed after 12 sessions, and in the case of the swimmer, after 8 sessions. Table 1 provides a list of the routes of the ‘Karkonosze pro-mental health’ project.

Table 1. Karkonosze pro-mental health project routes

| No. | Destination | Route | Km | Time (h)* | Total** |
|-----|--|--|------|-----------|-------------|
| 1 | Hvezda (959 m above sea level) | Harrachov railway station – Dolní Kořenov – Hvezda (Štěpánka lookout tower) – Paseky nad Jizerou – Dolní Kořenov – Harrachov railway station | 18,9 | 06:20 | 563 / 563 |
| 2 | Łysocina/Lysečinská hora (1188 m above sea level) | Horní Maršov (bus stop) – Kutná (Rýchorská bouda) – Roh hranic – Horní Albeřice – Pod Lysečinskou boudou – Lysá hora/Lysečinská hora – Okraj Pass (bus stop) | 15,6 | 05:53 | 775 / 302 |
| 3 | Chalupa na Rozcestí (1349 m above sea level) | Strážné (town hall) – Bouda Na Pláni – Klínovka – Chalupa Na Rozcestí (refreshment stall) – Severka – Pec pod Sněžkou (bus station) | 15,3 | 05:26 | 642 / 650 |
| 4 | Harrachovy kameny (1421 m above sea level) | Harrachov (cable car) – Čertova hora – Studenov – Ručičky – Dvoračky – Harrachovy kameny – Vrbatova bouda – Labský vodopád – Pramen Labe – Labská louka – U Čtyř pánů – Krakonošova snídaneň – Mumlavský vodopád (Bouda u Mumlavského vodopádu) – Harrachov (cable car) | 28,9 | 10:10 | 1002 / 1002 |
| 5 | Vysoká pláň (1497 m above sea level) | Szklarska Poręba Car park (A. Mickiewicza Street) – Crossroads near Kamięńczyk – ‘Kamięńczyk’ mountain hostel – Hala Szrenicka – Szrenica – Vysoká pláň – Sněžné Jámy – Špindlerovka / Karkonosze Pass – Odrodzenie Mountain Shelter – Pod Pielgrzymami – Wang Temple – Karpacz, Wang (bus stop) | 27,6 | 10:18 | 1200 / 1079 |
| 6 | Śnieżka/Sněžka (1603 m above sea level) | Karpacz, Wang (bus stop) – Wang Temple – ‘Samotnia’ mountain shelter – ‘Strzecha Akademicka’ mountain shelter – Plain below Śnieżka – Śnieżka – Czarna Kopa/Svorová hora – Bouda Jelenka – Skalny Stół – Czoło/Čelo – Okraj Pass – Kowary, Gościniec na Starówce (restaurant) | 31,2 | 11:25 | 1124 / 1492 |
| 7 | Nad Růžovohorským sedlem (1 389 m above sea level) | Pec pod Sněžkou, parking U kapličky – Pod Větrníkem – Horská Bouda Růžohorky – Růžová hora – Nad Růžovohorským sedlem – Bouda Jelenka – Pomezni Boudy – Kowary Town Hall | 22,8 | 08:20 | 729 / 1033 |
| 8 | Pramen Labe (1390 m above sea level) | Szklarska Poręba, Polana Jakuszycka (train station) – Hala Szrenicka – Česká budka – Pramen Labe – Labská bouda – Martinovka – Ptačí kámen (viewpoint) – Moravská Bouda – Odrodzenie Shelter – Pod Pielgrzymami – Karpacz, Wang (bus stop) | 29,9 | 09:54 | 943 / 989 |
| 9 | Kaplička (1509 m above sea level) | Lánov (bus station) – Nad Dolním Dvorem (cross) – Dolní Dvůr (church) – Hanapetrova paseka – Pod Zadními Rennerovkami – Dvorská Bouda – Chata Výrovka – Kaplička (monument to the victims of the mountains) – Luční bouda – Złotówka – Karpacz, Biały Jar (bus stop) | 22,4 | 08:40 | 1085 / 838 |
| 10 | Česká budka (1405 m above sea level) | Vrchlabí (bus stop) – Křížovky – Přední Žalý (viewing tower) – Rovinka (refreshments) – Šeřín – Černá skála – Harrachova skála – Horní Mísečky (bus stop) – Vrbatova bouda (crossroads) – Labská bouda – Česká budka – Pod Labskými skály Summit – Szklarska Poręba Górna (railway station) | 33,2 | 12:30 | 1488 / 1260 |
| 11 | Slezská cesta (1429 m above sea level) | Karpacz, Wang (bus stop) – Pod Pielgrzymami – Odrodzenie Mountain Shelter – Moravská Bouda – Pod Pevností – Bouda U Bílého Labe – Slezská cesta – Złotówka – Karpacz, Biały Jar (bus stop) | 28,7 | 10:44 | 1263 / 1387 |
| 12 | Pražská bouda (1128 m above sea level) | Strážné (municipal office) – Hanapetrova paseka – Rudolfov – Tetřeví boudy – Hrnčířské boudy – Pražská bouda – U Thámových Bud – Vlašské Boudy – Velké Típpeltovy boudy – Pražačka – Horní Maršov (bus stop) | 22,7 | 07:47 | 764 / 980 |

* assumption: speed 4 km/h, ** sum of ascents (m) / sum of descents (m).

The initial outcomes of the ‘Karkonosze pro-mental health’ project have been deemed satisfactory. The approach adopted in this project constitutes an innovative form of psychological assistance, as it involves the stimulation of the client’s nervous system through physical activity, specifically tourism. The efficacy of this approach is evidenced by the complete release of the nervous system during the hiking sessions, a phenomenon that traditional methods are unable to replicate. It was observed that during these excursions, the athletes engaged in discussions concerning challenging subjects, and upon reaching the summit, they attained a state of heightened awareness and proceeded to address issues during the descent. The outcomes of this study demonstrate that clients experience a marked improvement in mood, accompanied by an increased capacity to discuss their achievements. The ‘Karkonosze pro-mental health’ project demonstrated a positive relationship between clients and psychologists, a decline in tension among clients, an increase in trust in psychologists, corrective emotional experiences among clients, changes in their behaviour towards non-neurotic behaviour and modelling.

It should be emphasised that the athletes participating in the ‘Karkonosze pro-mental health’ project had been physically and endurance-trained to successfully face the mountain routes. The project itself is aimed at athletes and it is therefore reasonable to assume that the clients in the ‘Karkonosze pro-mental health’ project are prepared to combine active tourism with psychological assistance. The project is not recommended for individuals lacking the physical fitness required for mountain hiking. It is assumed that hiking through the Karkonosze mountains might be a challenge for non-athletes and that these individuals might not be able to communicate effectively with the psychologist in order to solve the problem while struggling with the ascent and descent at the same time.

Author’s contribution

Conceptualization, PAP, JB, and ZNP; methodology, PAP, JB, and ZNP; software, PAP, JB, and ZNP; check, PAP, JB, and ZNP; formal analysis, PAP, JB, and ZNP; investigation, PAP, JB, and ZNP; resources, PAP, JB, and ZNP; data curation, PAP, JB, and ZNP; writing - rough preparation, PAP, JB, and ZNP; writing - review and editing, PAP, JB, and ZNP; visualization, PAP, JB, and ZNP; supervision, PAP, JB, and ZNP; project administration, PAP, JB, and ZNP; receiving funding, PAP, JB, and ZNP.

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References:

1. Yermakova, T. (2024). Physical culture and recreation: a systematic review. *Physical Culture, Recreation and Rehabilitation* 3(2), 46-57. DOI: 10.15561/physcult.2024.0202
2. Dobosz, D. (2024). Methodological dilemmas concerning measuring of mental and social health: a narrative review. *Archives of Budo Journal of Innovative Agonology* 20, 130-139.
3. Book, R.T., Svensson, J., Stambulova, N. (2024). Narrative research in sport and exercise science in the early 21st century: a state-of-the-art critical review. *Qualitative Research in Sport, Exercise and Health* 16(6), 567–597. DOI: 10.1080/2159676X.2024.2374827
4. Piepiora, P.A., Piepiora, Z.N., Stackeová, D., Bagińska, J. (2023). Editorial: Physical culture from an interdisciplinary perspective. *Frontiers in Psychology* 14, 1254027. DOI: 10.3389/fpsyg.2023.1254027

5. Piepiora, P.A., Piepiora, Z.N., Stackeová, D., Bagińska, J., Gašienica-Walczak, B., Čaplová, P. (2025). Editorial: Physical culture for mental health. *Frontiers in Psychology* 15, 1537842. DOI: 10.3389/fpsyg.2024.1537842