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Motivation and mental well-being of long-distance hikers: A quantitative and qualitative approach

Krisztina Mayer, Andrea Lukács *

Faculty of Healthcare, University of Miskolc, 3515 Miskolc-Egyetemváros, Hungary

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ABSTRACT

Hikers performing long distances (1000–5500 kms a year) were analyzed using quantitative and qualitative methods to evaluate their mental well-being and to find their motivation as well as to analyze the excessive physical activity. 112 hikers completed a questionnaire ($M_{(age)}$ = 40.28, SD = 8.77, 57.1% male) and 25 individuals were interviewed. Distance had association only with perceived health status. There were no differences between males and females, as well as between age groups and educational attainments regarding distance. 33.3% of hikers indicated symptoms of loneliness and 4.5% were involved excessively in hiking that was significantly regressed by distress. Hikers had mainly intrinsic motivations to complete long distances including overcoming new challenges, finding the physical boundaries, experiencing a state outside the comfort zone, belonging to a special group with similar interest and attracted by the beauty of nature. Overcoming all these embodied in a flow experience that took them further to perform the new long-distance trails.

1. Introduction

The popularity of hiking has steadily increased in recent decades due to the developed trail networks and other tourism support services. It is one of the most popular outdoor recreational activities that encourage both younger and elder people to participate (Pomfret, 2006; Fredman and Tyrväinen, 2010). Over the years 340 national volunteer hiking clubs were established to keep the trail marks in order, and organize shorter and longer distance hiking all around the year on 12 795 km trails in Hungary. The hiking trails can be used for recreational purposes, for both short and long term physical activity with different exertion and physiological adaptations (Manning et al., 2015). Although the majority of people go hiking regularly, there is a subset of hikers who get up every Saturday morning around 4–5 o'clock, travel to the start of the trail, and after paying some register fees, embark on a long hike. They go several tens of kms at a time without stopping, often in cold, wind, rain, snow, ice, huge mud, or even extreme heat on a hot day. They hike from early morning to late evening, or often for longer distances from morning to next morning, possibly the next day until noon all the time, without a break, rest, sleep (The time limit of a 100 km track is 24 h, of a 200 km track is 55 h). After completing the distance within a given time, they get a small badge, or badge and diploma, and they happily return to their destination, and in a day's time plan their next track's location and distance. There are some hikers who, after an 80-100-km hike on Saturday, also set to hike 30–50 kms on Sunday and do so every weekend, a total of 52 times out of the 52 weeks. And there are those who keep this performance for several years. There are 4937 registered hikers nationwide who regularly perform hikes, and 300 of them perform 1000 or more kms a year (Hungarian Hiking Association). Some authors argue that people like setting distance goals and challenging their physical ability and self-esteem (Mueser, 1998; Kil et al., 2014). A set of literature mention the physical, mental and physiological benefits of hiking that are linked to other outdoor benefits in natural environments (Hill et al., 2008; Svarstad, 2010). Janke et al. (2006) pointed out that health is more important than age when it comes to leisure activities. However, it is worth mentioning long-distance hiking is associated with frequent exhaustion, physical and mental stress as well as possibility for injury (Gardner and Hill, 2002). This raises the question: why do people continue their hike despite the pain and many inconveniences. How can they reach the final destination with a smile on their faces after 24–55 h hard hike and why do they embark another distance on the next day or next week. What motivates these individuals to participate in such a demanding activity? Studies highlight motivation as a key factor for maintaining the physically active behavior and adherence to regular exercise (Hagger and Chatzisarantis, 2008; Aaltonen et al., 2012). Based on previous studies, an important motivation factor for younger and

* Corresponding author.
E-mail address: andrea.lukacs8080@gmail.com (A. Lukács).

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older hikers is maintaining health (Caglar et al., 2009; Dacey et al., 2008). However this type of activity is already beyond the ordinary recreation and it raises the assumption of some other motivating factors. Taking into account the new phenomenon of exercise addiction (EA), which has detrimental impacts on individuals who are engaged excessively in physical activities (Hausenblas and Downs, 2002a), we suggest long-distance hikers may border on it. Individuals with this behavioral addiction usually lose control over their physical habits and undertake physical activity regardless of injury, weather, time demands, leading to deterioration of health (Szabo, 2010).

As yet, there is a lack of literature investigating long-distances hikers on a regular basis and their motivation to perform long distances for years, this study aimed to explore the motivations for participating in long-distance hikes, completing at least 1000 kms a year, and to investigate psychological well-being and exercise addiction in the context of distance performed, gender and age.

2. Materials and methods

2.1. Study design, participants and procedure

This cross-sectional study design involved survey method for analysing quantitative variables and in-depth semi-structured interviews to gain deeper and inner information on the long-distance hikers' motivation, inspiration and burdens in their natural settings (Neuman, 2014). First we sent an online questionnaire to hikers via social networking ("Hiking society", "Free hike", "Hungarian Hikers", "Kinizsi 100" and "Hike addict") for quantitative analysis. Secondly, we visited two organised long-distance trails where in-depth semi-structured interviews were conducted with 25 individuals on voluntary nature. Being 18 years or older and physically active for at least two years in long-distance hiking were among the inclusion criteria. In this study hikers were analysed who completed at least 1000 kms in the previous 12 months.

2.2. Ethics

Participants were informed about the purpose of the study, its anonymity and the voluntary nature of the participation at the beginning of the questionnaire and interviews. By clicking the consent button, survey respondents agreed to take part in the study. Interviewees gave formal consent before conducting interviews. No incentive was given for the participation. The study was approved by the Borsod-Abaúj-Zemplén Regional Ethics Committee and the Review Board of University of Miskolc.

2.3. Measures

2.3.1. Demographics

Participants gave information about their sex, age, residence, financial situation and educational attainment.

2.3.2. Anthropometry

BMI was calculated from self-reported height and weight according to the Adolphe Quetelet formula: body weight (kg)/height (m^2).

2.3.3. Physical activity

Participants reported how long they have been hiking and how many kms did they perform during the previous 12 months. They also gave information about their childhood physical activity.

2.3.4. Well-being

WHO-5 Well-Being Index was used to measure the participants' subjective psychological well-being. Each of the 5 items is scored from 5 (all of the time) to 0 (none of the time). The raw score is multiplied by 4, so the higher scores represent better well-being (Topp et al., 2015; Susánszky et al., 2006).

2.3.5. Emotional profile

DASS-21 measured distress along the dimensions of depression, anxiety and stress (Lovibond and Lovibond, 1995). A respondent indicated on a 4-point scale the extent to which each of 21 statements applied over the previous week with 0 (did not apply at all) to 3 (applied very much, or most of the time). Higher scores indicate increasing distress. The questionnaire has shown good internal reliability in the hiker sample ($\alpha = 0.853$).

2.3.6. Loneliness

The UCLA 3-item Loneliness Scale was applied to evaluate the hikers' loneliness (Hughes et al., 2004). The scale uses three response categories: hardly ever (1), some of the time (2) and often (3). Scores are summed and higher scores indicate more loneliness. There is a cut-off point of 6 and above indicating loneliness of individuals. Internal consistency of the scale in our sample was ($\alpha = 0.849$).

2.3.7. Overall life satisfaction

Overall life satisfaction was evaluated using Cantril's Self-Anchoring Ladder of Life Satisfaction (Cantril, 1965). It measures how satisfied the individuals are with their life as a whole these days. The top of the 10-step ladder represents the best possible life satisfaction, whereas the bottom represents the worst.

2.3.8. Perceived health status

Visual Analogue Scale (0–100) was used to evaluate the hikers' perceived health status (Hayes and Patterson, 1921). Higher scores indicate better health status.

2.3.9. Exercise addiction

Exercise addiction was measured using Exercise Dependence Scale-Revised (Hausenblas and Downs, 2002b; Mónok et al., 2012). Hikers responded on a 6-point Likert scale ranging from 1 (never) to 6 (always), a higher score indicates more exercise dependent symptoms. The scale allows both interval data and nominal categorization. The scale is based on DSM-IV criteria for substance dependence: tolerance, withdrawal effects, intention, lack of control, reduction in other activities, time, and continuance. Hikers scoring 5 or 6 out of the seven DSM-IV criteria were classified as at risk for EA while those scoring in the range of 3–4 were classified as non-dependent symptomatic, and scores of 1–2 are categorized as non-dependent asymptomatic.

2.3.10. Motivation

Interpretative phenomenological analysis was conducted for exploring the motivation for starting hiking and continuing long-distance hiking week by week all over the year (Wengraf, 2001; Smith and Shinebourne, 2012). Constraints and difficulties of long-distance hiking were also explored. A face-to-face interview was carried out at the finish of two popular long-distance hiking trails (Kinizsi-100 and Mátra-125) by the authors. The interviews lasted approximately 15–20 min for each participant. All the interviews were audio-recorded and transcribed verbatim with the permission of the participants. All the transcripts were checked via e-mail by the interviewees that the transcription was correct and accurate. Synthesis was made and presented by quoting from interviews in the paper.

2.4. Statistical analysis

For data analyses, Statistical Package for the Social Sciences (SPSS, Version 26, IBM Corporation, Armonk, NY) was used. Descriptive statistics (percentages, means and standard deviations) were calculated for all variables. Significance level was set up at $p \leq 0.05$. Relationship between variables was assessed using Pearson correlation coefficients, t-test, ANOVA, and Fisher's exact test as appropriate. Multiple regression analysis with stepwise selection was used for finding the explanatory variables of higher symptoms of EA.

3. Results

3.1. Participants

This sampling procedure yielded 112 fully completed questionnaires. Hikers represented all the geographical regions of Hungary (19 counties), the largest proportion was from the capital, Budapest. Description statistics of the participants is displayed in Table 1.

3.2. Relationship of distance performed a year to demographics, health and psychological status

Using t-test and analysis of variance regarding the distance, there were no differences either between males and females, or among age groups (18–35, 36–65 and above 65) and educational attainment. Distance performed a year had relationship with the perceived health status ($r = 0.278$; $p = 0.003$). Although distance performed a year did not correlate significantly with loneliness, 33.3% of hikers indicated symptoms of loneliness. Loneliness had significant relationship with distress ($r = 0.509$; $p < 0.001$), life satisfaction ($r = -0.454$; $p < 0.001$), perceived health status ($r = -0.292$; $p = 0.002$), and higher EA symptoms ($r = 0.225$; $p = 0.018$). Subjective psychological well-being scored M = 62.18, SD = 17.50, life satisfaction M = 7.48, SD = 1.56, and perceived health status M = 83.86, SD = 12.68.

3.3. Prevalence of risk for exercise addiction

The prevalence of risk for EA in hikers was 4.5%, whereas 52.7% of them were non-dependent symptomatic, and 42.9% non-dependent asymptomatic. The highest score (3.25) was on the Tolerance subscale that means hikers need increased amounts of physical activity to achieve the desired effect. There was no difference between male and female hikers (Fisher exact Test = 1.43; p = n.s.) or between younger and older groups regarding the Exercise Dependence Scale categories (Fisher Exact Test = 1.18; p = n.s.). In the multiple regression analysis, the only significant explanatory variable of higher symptoms of EA was distress (Table 2).

3.4. Motivations

Twenty-five long-distance hikers were interviewed of whom 40% were females. Hikers ranged from 30 to 68 years old, distance performed a year ranged between 1200 and 5500 kms. Table 3 provides information on interviewee demographics, hiking activity and distance performed in the previous 12 months.

Table 1. Descriptive statistics of the participants.

Mean (SD) and frequency	Participants
Sample size	112
Age (years)	40.28 (8.77)
35 and younger: 36 and older	32.1 : 67.9
BMI (kg/m^2)	23.74 (3.45)
Sex ratio (%) Male: Female	57.1 : 42.9
Socioeconomic background (%)	
below average: average: above average	8.9 : 72.3 : 18.8
Educational attainment (%)	
below high school: high school: higher education: M/D*	0 : 33.6 : 66.4 : 1.8
Physical activity in hiking (years)	13.49 (12.02)
Distance performed a year (km)	1983.48 (1068.05)
Childhood physical activity** (%) Yes: No	48.2 : 51.8

* M/D: missing data.
** Childhood physical activity: to be engaged (yes) or not to be engaged in regular sports (no).

3.5. Initial inspiration to hike

Hikers had different inspirations to start this type of outdoor recreational activities. First, love of nature was mentioned, however, only two referred to childhood family experience in this field. An increased free time was also reported with different reasons.

"I was lonely after my husband had died and I needed something to bring a system into my life. (F58)

"My kids are adults, I think I can do now what I love, for my own pleasure." (F56)

Exclusive inspiration of another person or partner was also a rationale or visual experience that launched them to join a hiking club or hiking team.

"It was my partner who invited me. I just wanted to keep up with her. (M47)

"One of my friends invited me to go for a 40 km hike. Why not, I thought. It was the start and I fell in love with this activity. I've been doing it for 17 years." (F40)

"One of my friends asked me whether I like hiking. I like nature from my childhood, so I answered 'yes'. Since then I already completed 233 trails over 100 km." (M33)

"When the weather was nice, we always were somewhere outside in my childhood. Much later I saw a lot of people hiking in the mountains and I joined that group. … For many years, I performed only 20 km long distances until I read an ad about other long-distance hikes. I increased the distances pretty slowly" (M65)

"I first saw the hikers of the Kinizsi-100 trail … I didn't know where these people were going for hours. Some of them were talking to each other, some of them were silent and tired, but all of them seemed to be connected by something invisible. I felt like I should go with them, too. In two years I also have performed the Kinizsi-100 trail." (M53)

3.6. Motivation to go on long-distance hikes

Several diverse motivations were mentioned, however, one of them applied to everyone. Hikers were motivated by the challenge and the feeling of success, as well as the desire to know the boundaries and getting to know themselves.

"Get to know your own body, your thinking, your attitude, your perseverance, your reactions to a given situation which evolves with each accomplishment… Every time I get to know something new about my body, my soul on the verge of total exhaustion on a long-distance hike. I want to experience many more of these." (F40)

"Hikes above 50 km are already a kind of challenge. So far, I've had nine 100 km hikes. Each has a separate story and I lived through it in different ways. I think it all concerns us how resilient we are, where our performance limits are, how we react in non-everyday situations. You can also learn surprising things about yourself." (F56)

"After shorter hikes, a longer distance is a challenge. After completing the distance, I am proud of myself." (F44)

"It's a challenge in my everyday life. After my 100 km trails, I realized that I have more in me, I can go beyond my own limits, so the 120 km Lake Neusiedl circle came in 24 hours. I also have a sense of success, I am proud of myself. To be okay, we need the little crumbs of success." (F58)

"I love long distances (100 kms or more) because I need challenges to assess my ability to perform what I'm capable of at the age of 68." (M68)

"… I can "push my limits," that is, get to know my own limits, can sometimes experience a whole series of depths and peaks within a hike. It's

Table 2. Regression analysis for higher symptoms of exercise addiction.

	B (S.E)	ß	t	Sig
(Constant)	2.17 (.01)	-	21.890	<.001
Distress	.04	.51	6.03	<.001

$R = .51$, $R^2 = .26$.

Table 3. Hikers profile taking part in the interviews.

Mean (SD) and frequency	Participants
Sample size	25
Age (years)	48.86 (10.58)
Male: female ratio (%)	60 : 40
Physical activity in hiking (years)	15.20 (9.21)
Distance performed in the previous year (km)	2695.24 (1187.02)

a fantastic feeling when one comes back from a downturn and is capable of something he didn't even think of." (M47)

"It's the real gauging for me, it's a race with myself, a capitalized measure of where I am in my adaptability of conformity. Long distance is a test beyond the comfort zone." (M48)

"You start to get to know yourself on a long-distance hike. You think you know yourselves the best. I think you can say that if you really put your body to test. Multiple times." (F41)

In addition to this, there were individuals to whom long-distance hike gave identity and meaning to their lives.

"The motivation for completing the series of ultra-distances is the great awareness that I can belong to a narrow group within the hiking society." (M48)

"It's almost unbelievable that my body lets me do all these, and so I know even more who I really am." (F40)

"I know it sounds commonplace, but that's right: hiking has given a meaning to my life." (F34)

The vast majority of hikers being interviewed mentioned some sort of flow experience. This is a mental state, when individuals completely immerse in an activity, they have been experiencing. The ego falls away. They focus on the movement of their body, the breathing and the power of muscles; the ultimate goal is to complete the distance. No matter how tired and sore their legs are, they barely notice. They feel joy and freedom. It occurs when the individuals are engaged in an activity they love and in which they are skilled (Csíkszentmihályi, 1996).

"I feel like I'm in the perfect place here and now in the world, everything I've been looking for is here in me today." (F40)

"It's an amazing feeling to be able to focus one hundred percent on the task, the performance and so I can forget about my worries. It is a state of mind created by severe physical exertion,…I can really relax, forget troubles and be at home out somewhere." (M47)

"… it's a kind of lifestyle that I'm becoming through." (M48)

"This completes my life. This gives balance." (M48)

Desire to break away from daily reality also appears in hikers' reports.

Get out of the urban environment, leaving behind the everyday hustle and bustle." (M33)

"I have been sitting for 12 hours at my workplace, accompanied by 8 monitors, 3 keyboards, 5 mice, with a phone continuously ringing. I have to move out for my health and it's very good to go out into nature." (F56)

"I like to break out of monotonous everyday life, recharged by walking." (F57)

"Breaking out of the grey everyday life is what motivates me."(M33)

The experience of discovery, getting to know nature and love of nature also emerged among the motivations of the interviewees.

"I get to wonderful landscapes; I often try to go to places I haven't been to before." (M47)

"Getting to know our country or another one if we go abroad, with the miracles there." (M31)

"Motivated by the landscape, the beauties of the environment, walking in new places, new landscapes." (M47)

"*I've always loved being in nature, surrounded by loved ancient nature."* (M65)

"The main motivating force is the love of nature, the thousands of stimuli that come there, the landscape that always shows a different face, the variety, the sincere beauty… no matter how many times, I like to go, I don't get bored of them." (M47)

Health protection as a motivational factor can be found not only in starting, but in the continuation of activity.

"Hiking is important for maintaining my health, both physically and mentally." (F53)

"I have to move out of my daily stress for my health." (F56)

"I feel like I'm doing something for my healthier life with hiking." (F57)

"Hiking is a part of my daily life, an activity that is essential for my mental health." (M47)

The last motive that was discovered is the social affiliation that is characterized by a desire to interact and by pleasure in being with others (McClelland, 1987).

" I got a lot of experience and company through the tracks, even if I don't have close friends, I never had, but since I hike, I finally feel like I'm not alone." (F34)

"I often met people in the company of whom it is much more pleasant to move and relax than to be alone, with whom it is always good to meet or just meet again after a long time." (M61)

"You know it's a community experience ... my circle of friends is mostly from this company, I can hike with people who have the same "craze" as me." (M47)

"Hiking is a special way of life. … These people are connected by a common passion, a way of life with common experiences." (M48)

Although it was not a clinical interview, it seemed that some interviewees have already touched the boundaries of addiction.

" Hiking is an addiction, a way of life, a basic need for me." (M47)

"Hiking is specifically a way of life for me." (M48)

"If I can't go on a weekend hike for some reason, I feel like I missed something important. I don't miss it often." (M65)

"The long-distance hike became a necessity, practically an essential part of my life." (M38)

3.7. Constraints and difficulties of long-distance hike

Long-distance hiking are often associated with physical pain. The backpack easily rubs against the shoulders and blisters or blood blister

can form on the foot. Although less common, muscle aches or cramps can also occur.

"Sometimes I get blisters on my leg during the hike, sometimes my skin is completely off my heels, yet I don't give up the hike, I push my limits." (F58)

"*It can hurt a lot when my backpack rubs my back or my thighs rub against each other. If my underwear is only a little uncomfortable, after 12–15 hours it causes almost unbearable pain."* (M47)

"Tracks help you get to know the physical pain you can't even imagine." (F41)

Some mentioned "starvation" as well as dehydration or lack of salt during long track.

"It's common on summer hikes that I can't get as much water and salt back into my body as I sweat, even though I always have salt tablets with me." (M53)

"On long hikes, when I've been going for 15–16 hours, nothing goes well anymore. Even energy gels often come out of me." (M48)

Interestingly, the weather causes difficulties in every season and everybody reacts on it in different ways.

"Prolonged rain is very unpleasant, everything is wet, your feet, your hands get cold and your feet slip in your shoes, you will have a blister much sooner because your soles are completely spread out. On the other hand, you can't see anything from the hood, barely hear each other from the rattling of rain jackets. I can hardly wait for it to end. Plus, it's much easier to fall and slip." (F40)

"For me, ice is the biggest enemy, no matter how much I put on the crampons or carry a stick, I'm often more insecure, moving slower, I don't like it... In deep mud, every step is harder, it takes strength out of people, and the time as well…" (M65)

"I have a hard time withstanding the heat, … I suffer a lot on summer, sometimes I can barely breathe ." (M68)

"I have a harder time in summer, and then a lot of ticks, beetles and mosquitoes bother me, in winter I have no problems." (M48)

Several participants mentioned hitting the wall, which comes around 60–80 km. In such cases, many people do not suffer so much physically, but lose motivation, questioning why they are here, why they do it, what the point of it is.

"It's my spiritual anguish that overwrites all pain. Because it feels really good to be really proud of myself! In vain I explain it, if you haven't tried it you won't understand… experience what it's like to argue with yourself in the middle of the night, at the 80th km. … Fight to stop or move on." (F41)

"Sure, you go through dead ends and many times wishes it all hell, but there's less joy than when you arrive triumphant at the finish line and in a few days you'll break and you head on the next challenge. It's a lot harder mentally than physically, but a lot of friends, a few good words, and nostalgia about places you've been to, … and with that feeling you can do it further and regain strength from somewhere every weekend." (M33)

4. Discussion

Long-distance hikers form a unique community of individuals who perform many kms a year and most of them keep this performance for years. They are not considered athletes, although their physical performances are astounding. Using quantitative and qualitative methods, this study provides a comprehensive picture about hikers performing 1000–5500 kms in a year. To our knowledge, no other investigations have yet been designed to assess long-distance hikers from the perspectives of demographics and psychological well-being, or to determine the prevalence of exercise addiction. In addition, interviews were conducted in order to hear the most appropriate people on the most appropriate spot about their motives for starting hiking, keeping up strenuous exertion week by week throughout a year and their possible constraints and difficulties regarding long-distance hike. In this study, we focused on the long-distance hikers themselves.

Hiking is popular among young and old, however, in our sample the middle-aged and older adults are overrepresented with similar gender ratio. Physical abilities of even older people can be manifested in this lifelong physical activity that makes this type of activities particularly valuable (Dionigi and Flynn, 2007; Atalay and Cavlak, 2012). Walking is a biomechanically simple form of movement that does not require special acquisition. It can be started almost at any age without a childhood history in hiking or other sport activities. It seems both men and women do this activity in a similar way; no gender difference was observed in distance performed. Distance performed is associated with perceived health status that is understandable; people embark on long distance when they feel able to perform it. Manning et al. (2015) found prolonged strenuous trail can provide sufficient cardiovascular stimulation to induce beneficial physiological adaptations and health benefits such as aerobic exercise.

An interesting finding of our study is that more than one third of participants presented the symptoms of loneliness that correlated with inadequate distress, life satisfaction and perceived health status, as well as higher symptoms of exercise addiction in our sample. During the interviews we also met hikers who felt lonely. Hiking groups in particular offer unique opportunities for lonely individuals that can enhance their psychological state. On the trails, they can meet companions, or receive a few nice words from someone they would not get otherwise in other environments. We also believe the successful accomplishments of distances, diplomas, badges awarded for the performances, reports on social media interfaces also contribute to reducing the feeling of loneliness. When feedback comes in, likes, kind congratulatory comments, even for days, this alleviates loneliness and gives the illusion of being in company, even if the company is only virtual. The dopamine release caused by the messages, on the other hand, generates a real feeling of joy as well as a successful experience of the moment of reaching the finish line for days.

Prevalence of risk for EA in hikers was low (4.5%), however it is much higher than in general population (Mónok et al., 2012). No literature has yet been found in which the addictive hikers would be analyzed in detailed. Corazza et al. (2019) evaluated EA in fitness setting including hikers (12.8%), however the hikers were not analyzed separately from the other types of activities. In their study, EA was identified in 11.7% of the overall sample. Lukács et al. (2019) evaluated Hungarian amateur runners using the same inventory with a prevalence rate of 8.9%. Other studies presented a broad range of prevalence depending on types of forms of physical activity and population studied. In our study, EA was regressed by distress. The more stressful a person's life is, the more endangered someone's sense of well-being, whether physical or mental, the more they need a handrail, a coping strategy, and a coping mechanism. It can also be a form of physical activity, which is really helpful at first, but over time, greater and greater of a dose may be needed to provide the same feeling of well-being as earlier. Thus, it slides into a dependent state. In this study, only 5 individuals were detected and 3 interviewees were supposed to develop this problem. Based on such a small number of samples, it would not be appropriate to draw a far-reaching conclusion regarding EA of long-distance hikers.

When interviewing individuals about their motives to start hiking, psychological needs, wish to escape from everyday life and being in natural environment were found as the main push factors. Natural environment means a sense of peace, stillness, intimacy and health protection as well as the beauty of the nature. Dominantly, they respect nature and follow its rules (*"…harmony between nature and human being" "I learned soon that without sufficient humility and respect [to nature] you can never go on a hike."* M33) Kim et al. (2015) conducted exploratory

factor analysis based on a survey of 430 nature-based hiking-tourists and found similar motivation factors.

Our interviewees started with short distances and slowly slipped into getting longer. To synthetize the reports of respondents about the motivations of going on long distances, we can conclude that the motives were mainly intrinsic. The hikers get a small badge and a personalized diploma after completing the trail, however, this is not such kind of external rewards that would motivate them; they do it rather for the enjoyment (for personal reward) (Lee et al., 2012). Essentially, the activity along with its physical and mental aspects is the reward on its own. Hikers want to have the sense of accomplishment, want to know their own limits or even push the limit, go beyond their comfort zone, and all of these help them to enhance self-esteem. They are not affected by the weather, it doesn't even occur to them to miss the hike. Health protection and social interaction was also mentioned as motivation factors, but it was rather enthusiasm and determination that was expressed and completion of the distance at all cost rather than the importance of pleasure hiking, or physical activity to maintain health. Every hike hides something unpleasant that needs to be overcome, including injury of different quantities, insect bites, nutritional problems, hitting the wall. Overcoming all these embodies in a flow experience that takes them further to perform the new long-distance trails. Based on Csíkszentmihályi's theory (1990), individuals instinctively feel even bursting joy while solving a particular task. They don't care about themselves; they don't care about their problems. In this case, self-consciousness temporarily disappears; sense of time is distorted. The reward value of an activity that provides such an experience is so high that people do it for the activity itself, even if it is difficult or dangerous. It is a state where the individuals are completely immersed in what they are doing, do not deal with themselves and focus solely and exclusively on the activity, mobilizes their resources to do so, and maximizes their performance.

4.1. Study strengths and weaknesses

The strengths of this study come from the mix method the study was conducted with. Statistical analyses and in-depth interviews were combined as to get multidimensional characteristics about the hikers competing long-distances. Participants represented the long-distance hikers of Hungary, more than one-third of them were reached. There were a few limitations while conducting the study. There is no information about the interviewees' and survey participants' similarities. However, the information we got from the same person with the quantitative and qualitative method did not interfere with the study outcomes. Another limitation is the cross-sectional design that may cause limited generalizability from these data. Despite this, we believe that our findings are novel and add to the body of knowledge about the long-distance hikers' community.

5. Conclusion

In this quantitative and qualitative research, hikers performing long distances were analysed to study their psychological well-being, including excessive physical activity and inner motivation for performing such strenuous long distances. The findings emerged that hikers had mainly intrinsic motivations to complete long distances including overcoming new challenges, finding the physical boundaries, experiencing a state outside the comfort zone, belonging to a special group with similar interest and attracted by the beauty of nature. Overcoming all these embodied in a flow experience that took them further to perform the new long-distance trails. Although only a small proportion of the hikers were affected by the risk of exercise addiction, it was still important. Early detection of exercise addiction can help prevent injuries from overload such as fatigue fractures, strains, or cartilage abrasions. It seems that only the actual health status correlates with the amount of distances covered by a year, other demographic and psychological variables had no effect.

Long-distance hikers form a special community for whom is natural to spent rest days getting up early in the morning and hike of minimum 12–14 h. These people are infinitely determined, able to withstand the vicissitudes of the weather, the steep climbs and their own weaknesses. The joy of getting on trail and getting the finish line compensates them for everything. Our study provides and insight into their way of life and the background of its psychology.

Declarations

Author contribution statement

Andrea Lukács, Krisztina Mayer: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

Data will be made available on request.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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