Introduction

Running is one of the simplest forms of human movement and the most natural way of experiencing psycho-physical fatigue. During the last few decades running has been commonly recognized as an effective preventive measure against civilization diseases. For many, running constitutes a permanent component of a healthy lifestyle; for others, it is a way of life and satisfactory leisure. Running is also a competitive sport. The marathon races are now popular all over the world and for the last few years they have been undergoing a unique revival. The races are held in different locations, in rugged terrain or inclement weather (desert, polar circle) and often arouse emotions hard to find at a track and field stadium. The present-day marathons are huge commercial sport and recreational spectacles in which any healthy adult can take active part. Several thousand people can participate at one time in a modern marathon race. The attendance size determines the prestige of each race. Marathon participants include professional athletes and amateur joggers, the able-bodied and the disabled, and the old and the young, all forming together a diverse and colorful crowd [1].

The marathon is a foot race with an official distance of 42 km 195 m. It is an intensive modern Olympic event lasting a few hours. An ultramarathon is a sporting event over the distance of 100 km. At present the Polish, European and world ultranunning championships are organized. The Poland's National Athletics Federation is the body which assigns sports classes to individual runners for their results achieved at attested courses at a 100 km distance.

Different types and forms of motor activity can affect one’s health to a different degree. The healthiest motor stimuli are endurance exercises of moderate intensity, for example, jogging. An endurance exercise imposes heavy demands on human organs and systems, which determine one’s physical fitness [2] and health. A high fitness level greatly facilitates one’s health potential [3, 4]. Although most health training recommendations focus on endurance exercises, their recommended intensity is usually average or moderate [5]. There are no explicit data confirming a negative impact of intensive training on the human body [6].

During foot races over distances longer than the traditional marathon length, the experience of competing with one’s self, the weather or the distance surpasses the experience of competing against the opponents. In ultramarathon races the best runners can cover a 100 km distance in 7 hours, while novice competitors may run it for over 20 hours. Often the event organizers impose

ABSTRACT

**Purpose.** The aim of the study was to examine opinions of runners regarding the effects of ultra distance running on their health. **Basic procedures.** The study sample was a group of 54 runners, participants of the Polish Supermarathon Championships in Kalisz. The method of diagnostic poll was applied using author’s own questionnaire. **Main findings.** The majority of extreme distance runners stated they experienced no health problems; keeping fit was their main motivation to run long distances and since taking up running their health had improved. At the same time 36% of the interviewees admitted that running longer distances than the marathon length may have a negative impact on their health. **Conclusions.** Proper understanding of the principles of amateur and professional sport is the basis of safe physical activity. Amateur sport activity is correlated with a healthy lifestyle and positively affects the physical and psychosocial aspects of health. Simple forms of motor activity should be popularized in Poland as well as professional sport.

**Key words:** ultramarathon, running, amateur sport
a 24-hour time limit (with the winner covering the most
distance in that time).

Long distance and marathon races are of profession-
and – at the same time – amateur and recreational
character. The preparation of the runner’s body for such
an event is definitely a type of sport training rather than
health training. It is not clear whether an ultramarathon
 can be explicitly classified as a competitive sport event
or extreme recreation. In the case of ultramarathon its
classification relies not so much on the type of activity
(sport or recreation) but rather on its psychosocial con-
text. Ultra runners display a variety of attitudes towards
their competition as well as different aims and motiva-
tions. The egalitarianism of long-distance running
events points to the mixed sport and recreational char-
acter of the contemporary, highly commercialized mass
foot races. According to Naglak, the marathons and
other long-distance races are non-classified. He defines
them as “activities aimed at perfecting one’s personality,
 improving one’s health and physical fitness through ex-
ercise and competition. The effectiveness of these ac-
tivities depends on the durability of one’s psychical,
physical and motor dispositions. These activities consti-
tute a sport variety, whose growing popularity can
greatly contribute to physical activity becoming an in-
separable component of the way of life and physical
culture of the whole society” [7, p. 5]. In non-classified
sports the achieved results are of the athlete’s concern
only, and that is why these competitions lack all other
implications related to professional sport, e.g. financial.
What really counts is sheer participation in a race, over-
coming one’s weaknesses, and self-improvement. These
aspects are inherent in the Olympic idea.

The aim of the study was an analysis of opinions of
ultra runners concerning the health aspects of ultra dis-
tance running.

Material and methods

The study sample comprised a group of 54 male par-
ticipants of the 2001 Polish Supermarathon Champions-
ships in Kalisz held over the distance of 100 km. The
method of diagnostic poll was applied using the author’s
questionnaire. The subjects were asked about their
training experience, participation in ultra running races
and the effects of these races on their health (in their
subjective opinion). They were also asked whether run-
ning ultra long distances might, in their opinion, have
any negative effects on their health.

Results

Ultramarathons are egalitarian sports events open
to everyone. They do not require any expensive sports
equipment or special athletic skills. Each participant
must be over 18 years of age and is required to provide
his or her medical checkup results or a written state-
ment of consent and pay the registration fee. The
youngest participant was 23 years; the oldest 68 years
of age. Altogether 5 women and 54 men took part in
the Kalisz Supermarathon. In Poland, ultra distance
and marathon female runners are in minority (about
5–10% of all participants). The ultra runners compete
in different age categories (10-year ranges) set by the
Polish Running Association. Figure 1 presents the age
categories of the participants. The largest group (35%)
comprised male runners aged 40–49 years; the small-
est group consisted of competitors over 60 years of age
(4%). The youngest age category (18–29 years) com-
prised 13% of participants, i.e. fewer than in the cate-
gories of 30–39 and 50–59 years.

Participation in ultra running events requires long-
term, systematic, daily training mostly aimed at the de-
velopment of the body’s aerobic capacity, i.e. running a
great many kilometers on a weekly, monthly and yearly
basis. In the study sample 39% of runners had been
training systematically for several years; 24% for over
20 years, and 7% for over 30 years (Figure 2). Only
4 participants had trained for 2 years, two of whom had
already participated in 100 km events, and for the other
two the Kalisz competition was the first ultra running
event in their life.
43% of the participants had completed ultramarathons 1 to 4 times. For 22% the Kalisz competition was their first ultra running race; 19% had taken part in ultramarathons 10 to 19 times; and 6% more than 20 times (Fig. 3).

The ultrarunners had also taken part in running events over shorter distances, e.g. marathons (42,195 m), half marathons and other road running races as part of their preparation for the 100 km event. The runners under study had participated in a large number of different races a year: 35% in 10–19, 13% in 30–40 races (Fig. 4).

67% of the runners stated their health improved since they had taken up running over long distances (endurance training); 33% stated no improvement of their health condition (Fig. 5).

41% of the runners admitted that ultra distance running had no negative effects on their health; 35% admitted ultra distance running might have some negative effects of their health, while 24% had no opinion on the issue (Fig. 6).

Discussion

The annual Kalisz 100 km Supermarathon has been held every October since 1982. It is the oldest and the largest ultra running event in Poland. Five times the event was elevated to the rank of All Polish Championships. For the last few years long distance road running
events have become immensely popular in Poland, mostly due to the rapid development of the Internet social networking services, which serve as invaluable sources of information about runners, races and training methods.

The number of marathon runners in Poland has been steadily on the rise. Each year the record number of runners take part in marathon races in Polish cities, e.g. 3,000 participants in the Warsaw and Poznań marathons. A number of timed road running events (12-hour and 24-hour races) is also organized every year in Poland. The participants in 30, 40 and 50 km road races are mostly men aged 35–50 years. The completion of a 100 km race is regarded as a sports victory and all successful participants are awarded with commemorative medals. For many such a race is an immense challenge and opportunity to test one’s own body in extreme conditions. Top Polish ultra runners cover the distance of 100 km under 7 hours (the Polish record is currently 6 hours, 22 min and 33 sec). Some need more than ten hours to finish a race. The ultrarunners are usually former long-distance or marathon runners who wish to prolong their sport career or simply prove themselves over an ultra long distance. With their experience and physical and psychical endurance training they willingly accept the ultra running challenge. The opportunity to accomplish an extraordinary feat increases their satisfaction and is a boost to their self-esteem. It is rather difficult to answer the question why people are ready to undertake the tremendous burden of intensive endurance training in inclement weather and over a distance of 100 km. Even the most experienced ultra runners, who devote all their time and effort to the races and training, fail to deliver a straight answer.

Is it then possible at all to discuss health aspects in the context of ultra running? One can definitely point to the aspect of a healthy lifestyle, but the question remains whether ultra running endurance training can be considered health training? Ultra distance running is a dynamic endurance exercise, with a cyclical structure of movement involving large muscle groups. In health-related physical activity the intensity of exercise should not exceed 85% of HR max. Participation in an ultra running race involves huge energy expenditure and constitutes a serious overload to the human motor system [8].

The marathons and ultramarathons are sports events featuring a great variability of time results achieved by athlete with relatively constant levels of physical fitness. Improvement of these results is relatively easy even at a later age. The result is not only determined by the quality of the runner’s physical, psychical and coordination preparation but also by the race environment (season of the year, air temperature and humidity, atmospheric pressure, course surface and obstacles, strength tactics, consumption of fluids, strategies for completing the race, etc.). The unique aspect of ultra distance races is their organization outside the track and field stadium. The course of the race often leads through several towns in changing weather conditions, and the race itself may be several hours long.

The present study shows that the ultra runners have been training systematically for many years and have participated in a great number of racing events every year. The majority of the participants state their health has improved since they took up ultra running. Based on their own experience and knowledge the majority of the participants are of the opinion that ultrarunning has not caused any harm to their health, however, some of them have no opinion about this issue.

Different authors [2, 6] have noted that while strength, coordination or speed training improves the function of the neuromuscular system, endurance exercises mostly enhance the function of the cardiovascular system, respiratory system and cell and tissue metabolism.

As participation in ultrarunning races constitutes a heavy load to the human body, it also involves a risk of injuries and health deterioration. Certainly, a healthy lifestyle and properly carried out systematic endurance training do have a positive influence on one’s health potential in its physical and psychosocial dimensions.

Regular physical activity (training) usually brings about positive changes to one’s lifestyle. Health-oriented behaviors constituting a healthy lifestyle, i.e. proper nutrition, avoidance of stimulants, good sleep, periodic health examinations, are more frequently observed in physically active persons [9].

The propagation of mass sports events, e.g. road running events, seems an appropriate measure from the standpoint of public health. The development of proper (cautious) attitudes towards sports rivalry should be supported in order to promote such principles of physical recreation as fun, discretion and disinterestedness.

Conclusions

1. The majority of ultra runners – participants in extreme endurance races – stated they experienced no
health problems related to their activity. Their motivation is maintaining good health, and since they took up running their health has improved. 35% of the participants under study expressed an opinion that ultrarunning might have a negative impact on one’s health.

2. The proper understanding of the principles of amateur and professional sport is the basis of safe physical activity.

3. Participating in amateur sport and recreation events is closely correlated with a healthy lifestyle, which can exert a positive impact on one’s physical and psychological health.

4. In Poland record-seeking sports as well as mass amateur sports and different forms of health training should be widely propagated.

References


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