

REPORT

Activity 3. Health benefits and importance of smart training

Hosted by: Horolezecký klub Atlas Opava, z.s.

Date and location: 19. - 21.11.2021, Olomouc, Czech Republic

Aim: To increase the appreciation of the health benefits of climbing since it is a perfect sport for the development of the whole body and mind. To develop appropriate training plans for youth which include special exercises and additional non-traditional learning methods.

Participants:

Planinsko društvo Domžale
Sportsko penjački klub Fothia
Horolezecký klub Atlas Opava, z.s.
Horolezecky klub Horec Liptovsky Mikulas
Magyar Hegy – és Sportmászó Szövetség

Schedule:

Friday 19.11.2021

Agenda: Age-appropriate training plans and non-traditional learning methods.

We went through the results of the analysis from Activity 1 again and discussed current age-appropriate activities in climbing clubs that participated in the analysis.

We reviewed and presented different literature, and through discussion prepared a draft for age-appropriate training plans. We had a discussion about developing digital exemplary guides in the form of short videos, which would serve as an inspiration for new trainers or climbers. The videos would present exercises for safe climbing, where safe means knowing how to train correctly, stay healthy, and avoid injuries.

Saturday 20.11.2021

Agenda: Visit to the University of Palacký with a tour of the application center BALUO at the Faculty of Physical Exercise.

We had a presentation about the Faculty and the application center BALUO. The complex is divided into four main buildings - connection hall, testing halls I and II, testing swimming pool, and the center of kinanthropology research where the basic research is held. We were concentrated around the science and technology park which focuses on applied research, technologies, and innovative business and training in the field of prevention of lifestyle diseases and support of healthy lifestyle.

The application center Baluo targets three main groups for their work. The first group is the research group. They collect data from three age group categories: 3-5 years old, 6-17 years old, and 18+ years probands. The data is further used for assessing the effectiveness of a healthy and active lifestyle on selected health indicators. The second group contains professional athletes, sports clubs, and representation teams. This group is tested and analyzed in detail using a wide range of physical tests and measurements with further use in their specific training focused on their physical



weaknesses. In the last group are companies that collaborate with the center on creating corporate wellness programs that are sold to customers. This group includes grants for a university function

In the second part of the visit, we had a tour of the center during which we tried some of the tests that athletes go through. First, we saw the sports hall I. This gym is equipped with a camera and GPS system that captures the movement of the athlete. We tried a couple of agility tests in practice. Their technology provides them with the current heart rate, temperature, speed, and oxygen consumption of the tested athlete. After the test is finished, all the data is immediately transferred to the computer and analyzed within a couple of seconds. The system provides them with different comparisons of team athletes, showing the sportsman's strengths and weaknesses. Sports hall II is where a testing climbing wall is located. We witnessed a climbing test that Adam Ondra developed together with the BALUO development team. This test is specific for just climbers. We then went to the gym to try some strength tests that can measure specifically the force of the chosen muscle, and after that, we saw balance testing of athletes that examines the ability of athletes to accommodate their balance against outer forces. Lastly, we measured the body composition in detail.

The University collects a huge amount of information that is further processed for research and transferred to the coaches that accommodate the training plan accordingly.

In the third part of the visit, some digital applications had been presented to us. The app we were interested in the most is a software called Yarmill. It is an app that shares climbing training plans across team climbers. The coaches can virtually see how the team climbers are training, and how they are feeling during the training as if they are present at the climbing wall.

In the last part of the visit, we had a workshop in the form of a debate. We talked about how to integrate modern technologies and all the data collected for the testing into the training plan. Whether the information is useful or necessary for the improvement of climbers. We discussed potential visions of measuring brain activity during climbing as the mental game plays an important role in the performance of an athlete.

Sunday 21.12.2021

Agenda: Seeing the new climbing technologies in use.

For this day we moved to Brno to Hudy climbing wall, where we had exemplary training with warm-up exercises and stretching with the Czech representation team. We explored the app Yarmill in use. The young girls show us how they use the app to transfer information about how they felt during the training to their trainers. We discussed the pros and cons of virtual training.

Agenda: Analysis, age-appropriate training plans, and non-traditional learning methods.

We continued the discussion and work on digital exemplary guides from Friday's meeting, and we prepared the plan and structure for the videos. Novel learning methods can offer extra motivation for children since they make training more fun and interesting. Both the Yarmill app and the already mentioned videos are examples of digital non-traditional learning methods. We also discussed other non-digital possibilities, many of which were carried out in Activity 3 (2. Transnational meeting). Many traditional games and activities can be adjusted to climbing-specific exercises, climbing vocabulary, and methodology, for example, relay games and bingo/quizzes.

Annexes

1) photos





