Abstract

Title: An analysis of training load in standard and Latin American ballroom dancing in 10-15 years old children

Aims: The aim of this bachelor thesis is to study the intensity of physical activity of dancers during the performance of standard and Latin American dances. The analysis of the intensity of exercise will allow a deeper understanding of the effect of these dances on the human body and provide recommendations for an effective training process for dancers. Young dancers are often unaware that dance can be classified as an anaerobic sport with physiological demands similar to traditional anaerobic sports such as sprinting, swimming and weightlifting. The aim of this study is also to uncover the problems associated with the intensity of physical activity during the training of ballroom dances and to investigate the effect of these dances on the physical preparation of dancers. The research question focuses on the intensity of the dancers' physical exertion and the factors affecting this exertion. The results of the study could assist dance physiologists, physical therapists, and pediatricians in preventing growth-related injuries in young dancers.

Methods: respondents were approached through dance studios, clubs and online sources. Data collection was systematic over a two-month period. Participants were monitored using a Polar RS800CX watch and band, Apple Watch, and other devices that measured heart rate during training. Each training session consisted of a technical part (30-40 minutes) aimed at improving technique and a practical part (10-20 minutes) involving the performance of 5 or 10 dances, each lasting 1.5 minutes, with a short break between dances. During the training session, the participants' heart rate and physical activity were monitored, allowing analysis of the intensity of the exercise and its effect on the cardiovascular system. A 14-question questionnaire was also distributed to the participants, covering aspects of the training such as frequency, length, intensity, types of dances, skill level, perceived changes, motivation, difficulty, fatigue, perception of music, stress and expectation of results.

Results: The questionnaire survey provided an overview of about the respondents' dance training, including frequency of training, duration, intensity, types of dances, and skill level achieved. The majority of respondents train several days a week and with high intensity, which is indicative of their commitment and a serious approach to dance. Motivations for training vary and include enjoyment of dancing, relaxation and improving physical fitness. Intensity of physical activity varies from one type of dance to another. Comparison of the measurement results shows that Latin American dances are generally more physically demanding than standard dances. Boys have a

higher percentage of maximal cardiac capacity utilization in Latin American dances, while girls have a higher percentage of maximal heart rate of maximum heart capacity in standard dances. Estimated heart rate (HRmax) was calculated using the formula 208 - (0.7 * age). The average heart rate and calories burned were given for individual dancers for both Latin American and standard dances. According to the comparison of the average heart rate for Latin American and standard dances, we found that Latin dances are more physically demanding.

Keywords: physical activity, Latin American dances, heart rate, standard dances, dancers, dance sport, dance training