

## Abstract

This study is quasi-experimental research with an aim of the study: 1) to develop a circuit training program, and 2) to compare the effect of a circuit training program on physical fitness and archery skills. The sample used in this study included archery athletes. The research method includes: First, develop a circuit training program, implementing analysis and synthesis of relevant documents and researches. Determining the quality of the circuit training program by content validity to evaluate the index of item objective congruence (IOC) which a consistency ranged from 0.67 to 1. Second, the comparison before and after training with the circuit training program was performed. In data analysis, the statistics implemented included mean, standard deviation, and Paired t-test, and Independent t-test.

The results were as follows: 1) circuit training program comprised a 3-day workout per a week, training exercise time is appropriate 45 - 60 minutes per a day. The posture included elbow plank, mountain climber, seated V-up, back extensions, full Plank, bird dog, squat, full side plank, push-ups, and side to side lunge. These postures were at the exercise in combination with participant's weight at weeks 1-4 whereas at weeks 5 - 8 practicing with a semicircle ball (Bosu Ball). The results showed that the average leg muscle strength, arm muscle strength, frontal flexibility, balance and accuracy, and archery skills in the experimental group at post-training was significantly higher than the controlled group at the significance level of .01.

**Keywords:** Circuit Training, Physical Fitness, Archery Skills, Excellence