

Songsiri Phocharoen 2011: Effects of Rhythmic Deep Breathing and Relaxing Music upon Heart Rate Variability in Swimming Athlete. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Miss. Supatcharin Pan-uthai, Ph.D. 121 pages.

The purpose of this study was to compare the effects of rhythmic deep breathing and relaxing music upon heart rate variability. The samples were derived by simple random sampling selection of 36 swimmer athletes from Suphanburi Sport School with age ranging from 12-18 years. We were dividing into four groups of nine people by randomly assignment. Control group used regular swimming training program. Group 1 used swimming program with rhythmic deep breathing. The second group used swimming program with relaxing music. The third group used swimming program with rhythmic deep breathing and relaxing music three times a week within 8 weeks. The heart rate variability measured by Brand Polar of S810 i of the sample in four groups before training, after training 4th and 8th weeks. Data then were statistically analyzed by using mean, standard deviation, two-way analysis of variance with repeated measure, one-way analysis of variance with repeated measure and one-way analysis of variance along with multiple comparison testing using the Tukey's method. All testing used the 0.05 level of significant.

The results was analyzed after 4 weeks of training. The finding was the normalized unit in the high frequency of the control group with experimental group 1 and experimental group 1 to experimental group 3 differences statistically significant at the 0.05 level. The normalized unit in the control group with low frequency of experimental group 1 and experimental group 1 to experimental group 3 differences statistically significant at the 0.05 level and the proportion of high-frequency low-frequency division and experimental group 1 to experimental group 3 and the experimental group 2 with the experimental group 3. The third difference was statistically significant at the 0.05 level was found the normalized unit in high frequency, which indicated that the function of the nervous parasympathetic system of experimental group 1 was very high. This results indicated that rhythmic deep breathing was a method of mental training which the most prominently affect to performance parasympathetic system.

Student's signature

Thesis Advisor's signature