



Zumba: Analysis of Fitness

Author: Ashley Hackney
Faculty Sponsor: J.R. Wilson, Ph.D.

Neuromuscular Research Laboratory, The University of Texas at Arlington,
Arlington, TX;



Abstract

Zumba is a Colombian dance based fitness program that was developed in the late 1990s. The exercises use music with fast and slow rhythms and may also include resistance training. This new and sometimes intense workout is also being introduced to many women as a way to lose weight.

Purpose

The specific purpose(s) of this research was to evaluate any changes that might occur in fitness level and body composition after two weeks of participating in Zumba exercise sessions.

Methods

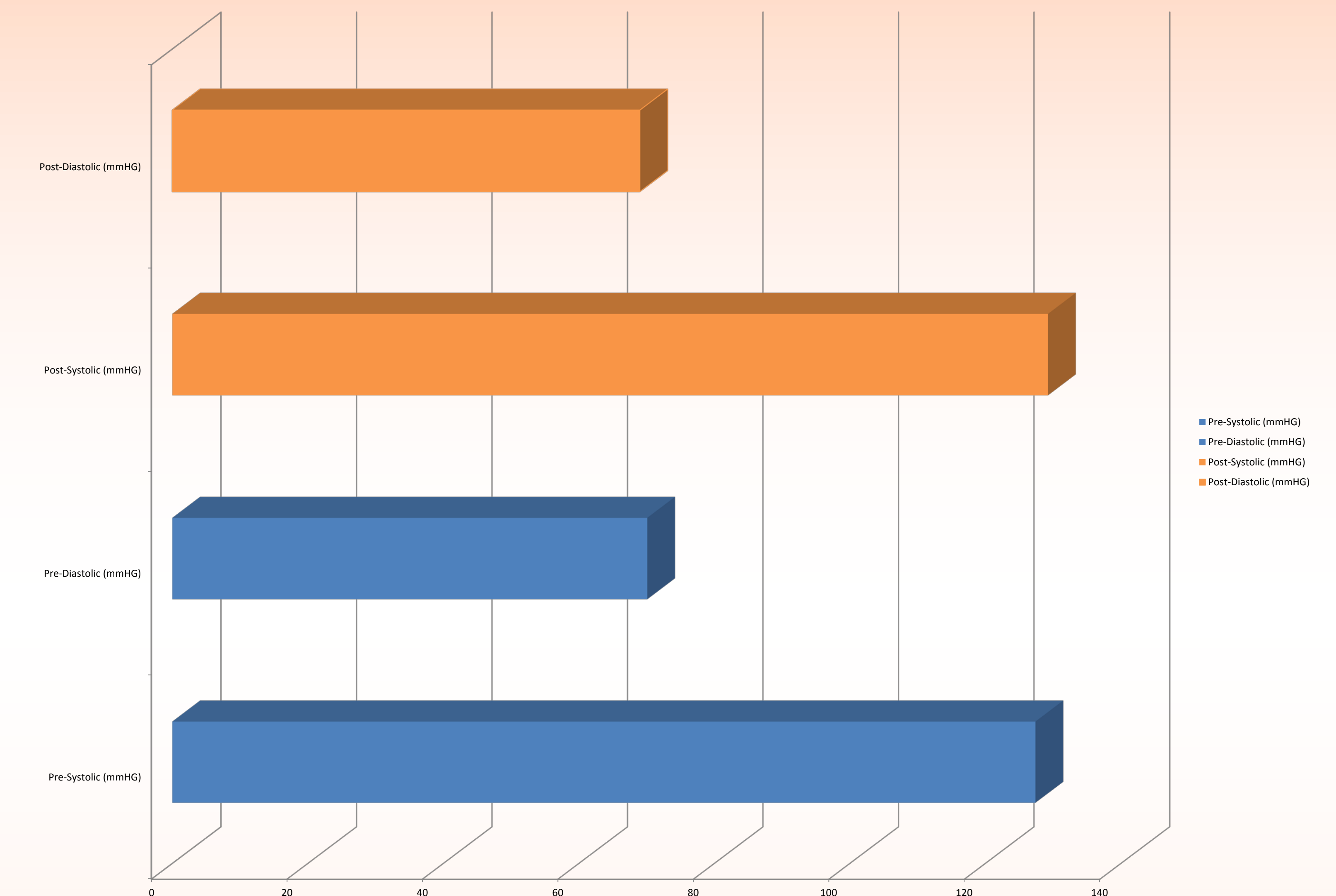
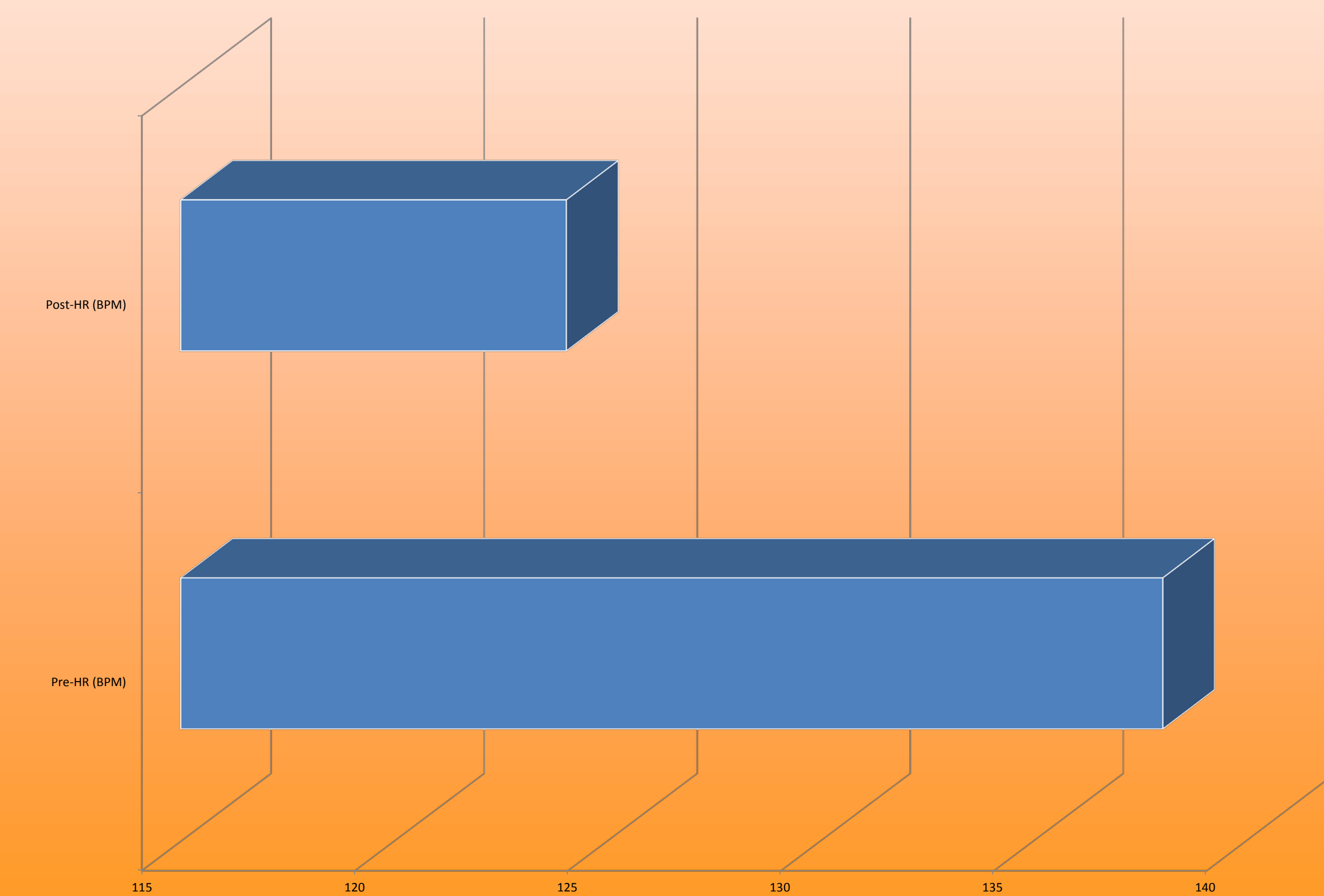
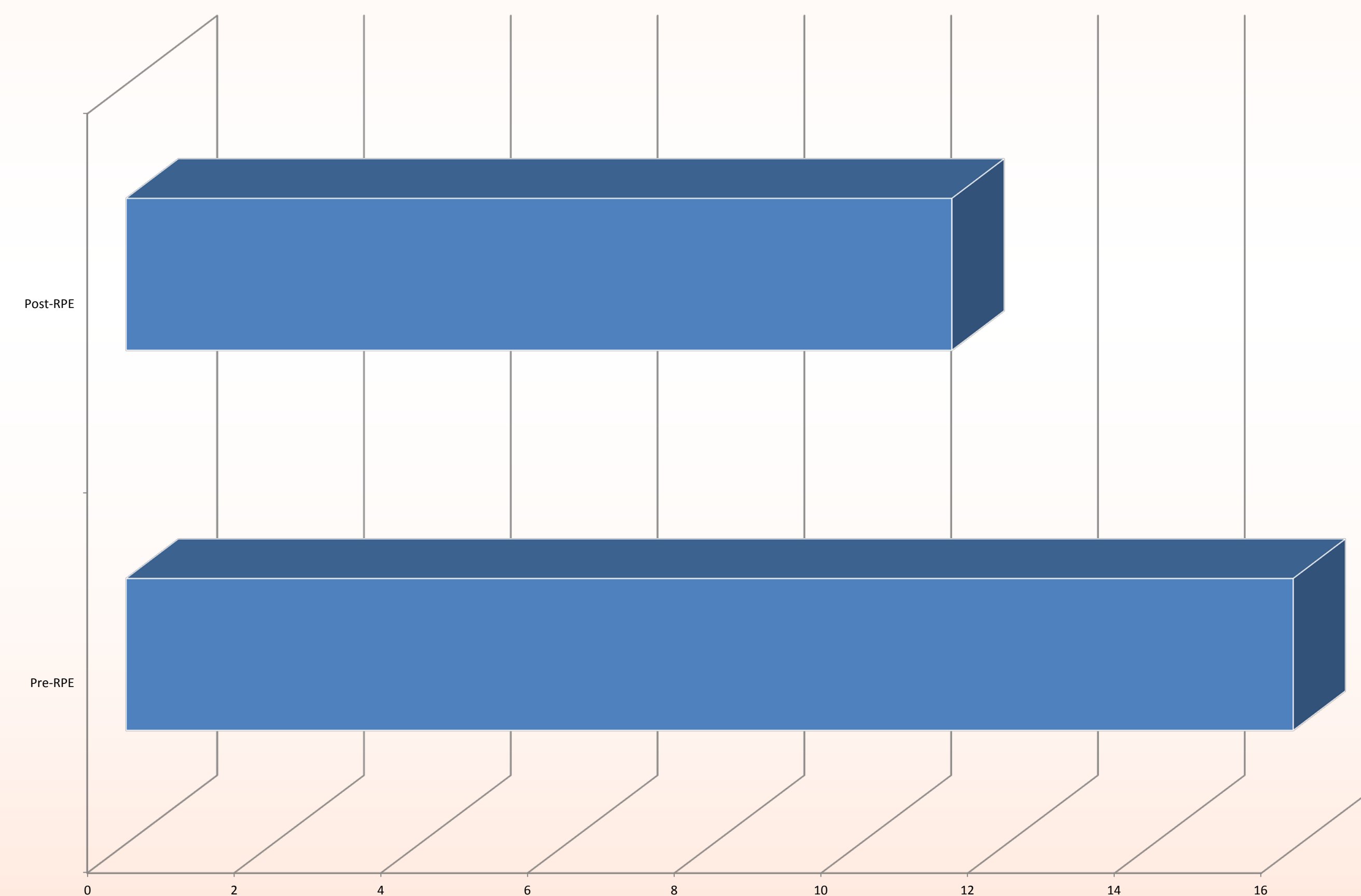
Five women, age 22.8 ± 3 yrs, who were students of a Zumba class taught at UTA, volunteered to participate in this study. Each subject had body composition assessed by seven site skinfolds (triceps, chest, suprailiac, sub-scapular, mid-axillary, abdominal and thigh) and then performed a YMCA sub-max graded exercise test on the Monarch bike with increasing speed and resistance until the end of fifteen minutes. During minute three of the fifteen minute test, heart rate (HR), rate of perceived exertion (RPE) and Blood Pressure (BP) were recorded.

Results

The percent body fat calculated from the seven skinfold site for the pretest was $19 \pm 4.2\%$ and $19.9 \pm 5\%$ for the post test. The maximal values for the pre-test were: HR: $154 \pm .4$ bpm; RPE 15 ± 0.5 ; and average maximal Blood Pressure (BP) 144/70.

Results (cont'd)

The difference between pre- and post- results for heart rate between every third minute was $p=0.16$ (not significant), Systolic Blood Pressure (BP) $p=0.39$ (not significant) and RPE was $p=0.18$ (not significant). In comparison all post-tests values were found not to be significant.



Conclusions

Measurements of the values for Max HR, systolic BP, RPE were analyzed using a two-tailed t-test. The results of the t-test indicate that the measurements obtained on the participants in Zumba did not show any significant changes in body composition or fitness level during the two week time period. that the changes between the data of the pre- and post- test comparisons were not significant.

