



Effects Of Verbal Encouragement On Anaerobic Field Tests

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Introduction

Introduction Anaerobically our bodies generate energy using two different energy systems. The first energy system uses adenosine triphosphate and creatine phosphate. It supplies energy for no more than 6-8 seconds. Activities like jumping and running for short periods of time utilize this energy system. The short-term anaerobic system also produces high-powered energy. However, it is a little more enduring and can provide energy for up to 90 seconds. Runners in the 400m event use this energy system. Motivation has consistently been used as a variable to study performance. Some studies have shown no effects of external motivation on anaerobic test performance while others have shown positive effects. Research have utilized different means of motivation (punishment, rewards) and or changing the environments (audience, music). Looking at sports, home teams consistently win a greater proportion of games played at home. The audience in the stadium can be the source of motivation for athletes to increase work output. While some previous research has revealed verbal encouragement to positively influence performance, while others indicate otherwise.

Purpose

The purpose of the study was to test the effect of verbal encouragement on anaerobic field test. Was the a significant improvement on performance in terms of higher heart rate, faster speeds, higher jumping ability, or more repetitions.

Methods

Participants

Eight students whom were all students at the University of Texas at Arlington volunteered to participate in this study. All subjects were fairly active and participated in physical activity three times or more a week.

Procedures

Subjects reported on the first day of the study and basic information was recorded such as age, height and weight and a heart rate monitor was attached to their chest to allow measurement of heart rate. Subjects than begun to perform four basic field tests that tested anaerobic power. The test included bench press, 40 yard dash, vertical leap, and pull ups. Subjects waited seven days to be brought back for day two. On day two the subject appeared again, the heart rate monitor was attached again to the subject chest, and they performed the same test as before, the only difference between the two days will be whether or not the subject received verbal encouragement. The principle investigator encourage the subject throughout the study by clapping and by saying any of the three phrases "good job", "one more", and keep it up".

Results

Gender (male)	8
Age	23.875 yrs. \pm 2 yrs.
Height	69.5 in. \pm 2.87 in.
Weight	174.71 lbs. \pm 21.4 lbs

Figure 1: Table displays a basic demographic of the subjects that participated in this study.

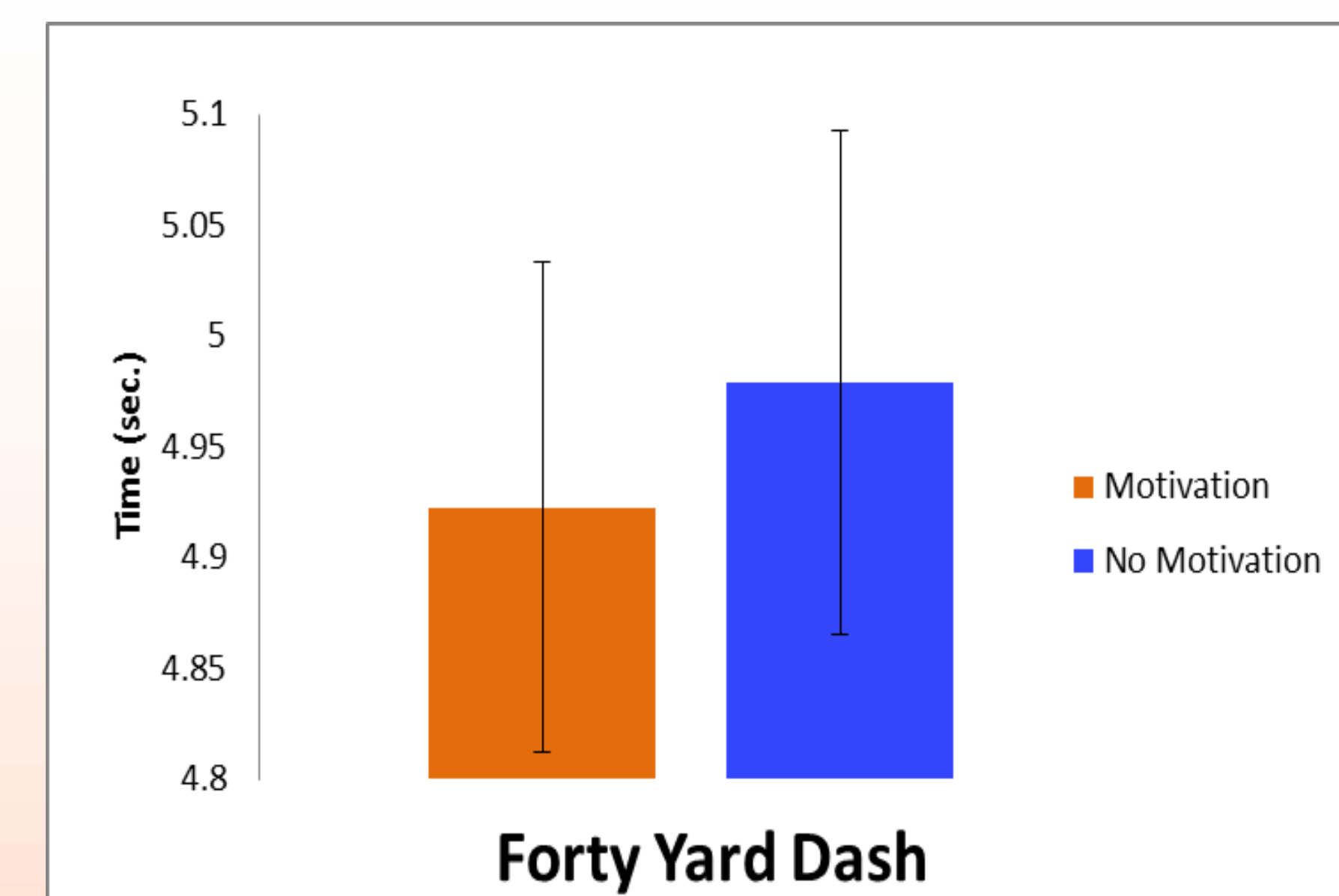


Figure 2: Displays the relationship between the forty yard dash and verbal encouragement along with standard error.

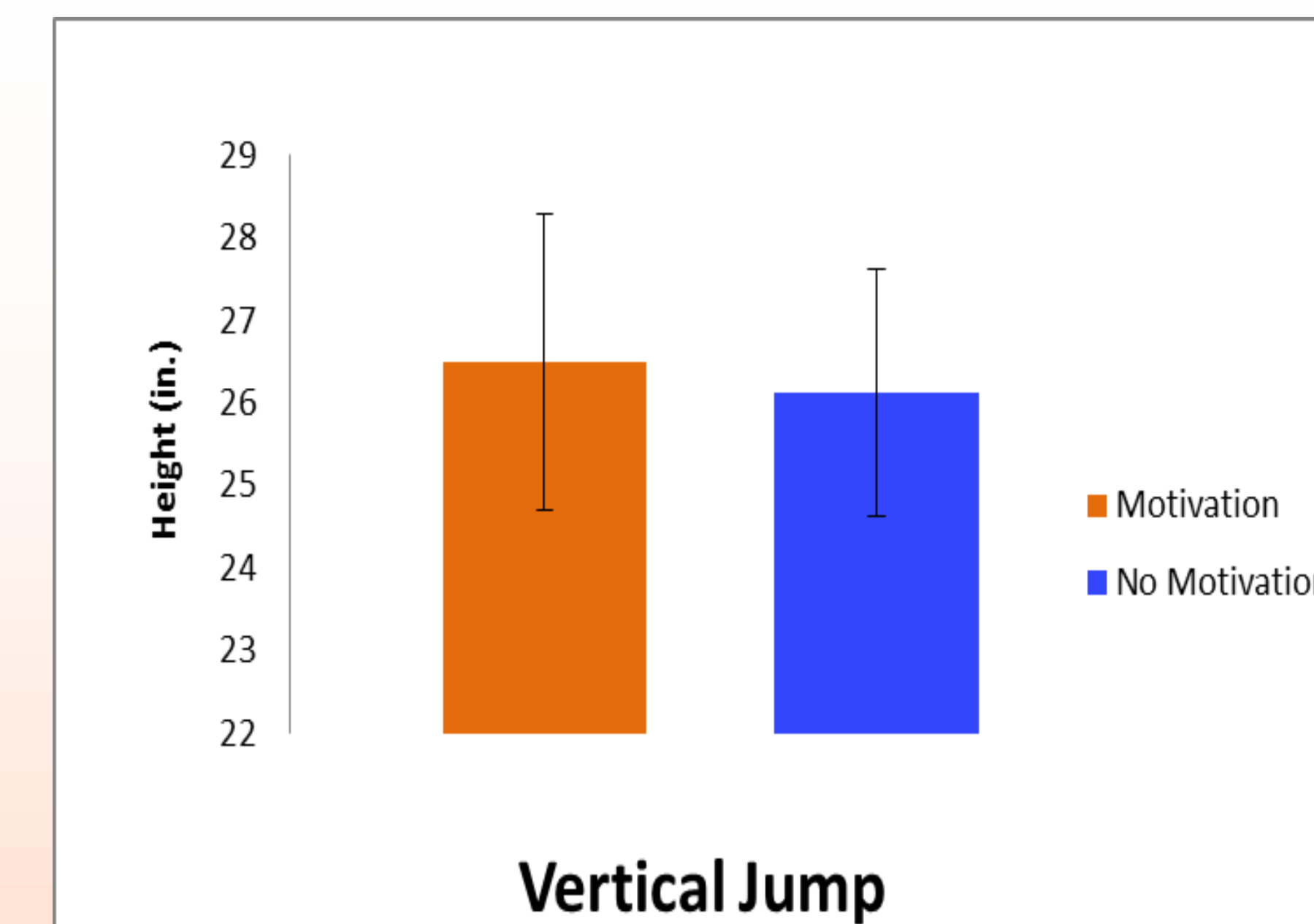


Figure 3: The relationship between Jump height and verbal encouragement with standard error.

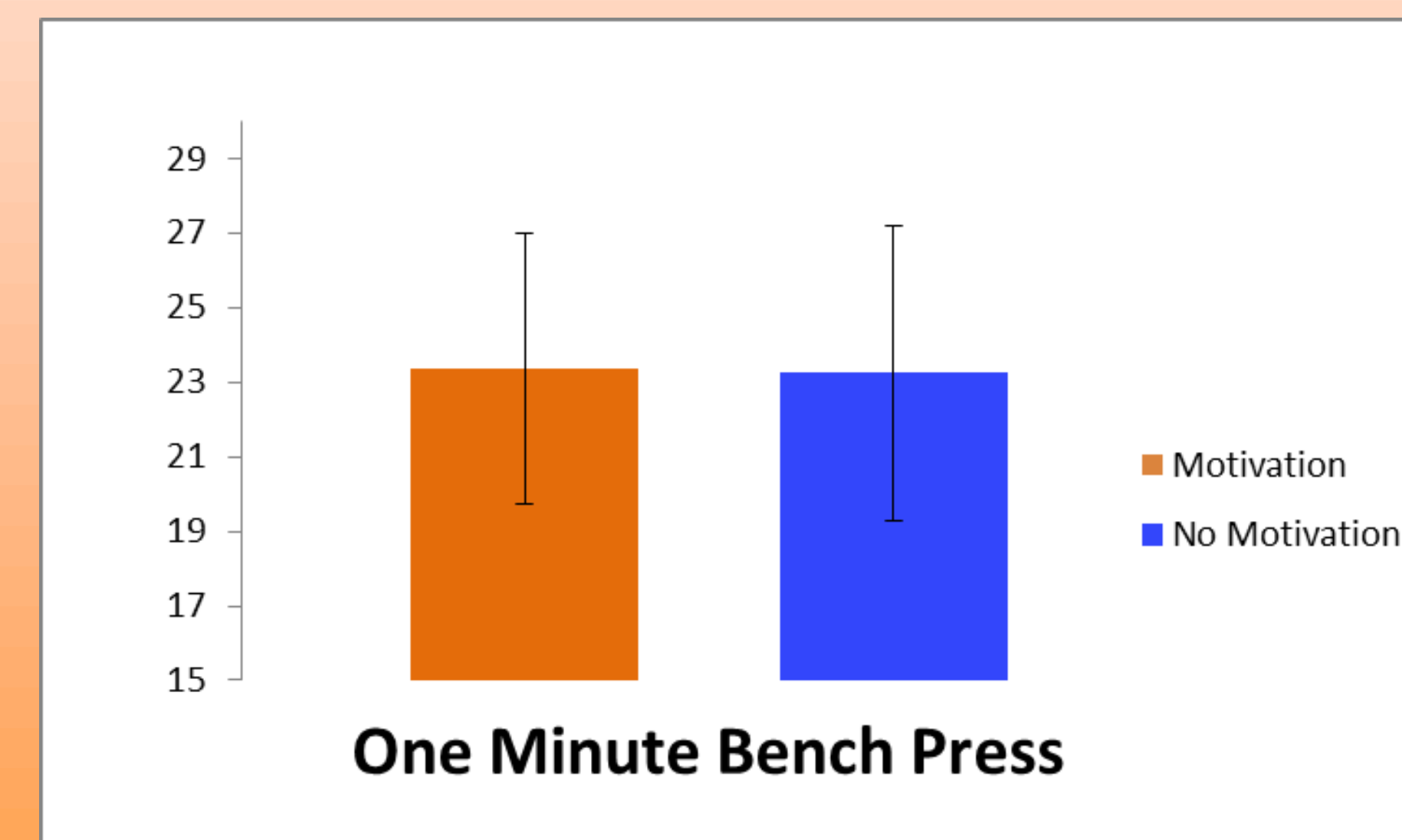


Figure 4: The relationship between one minute bench press and verbal encouragement

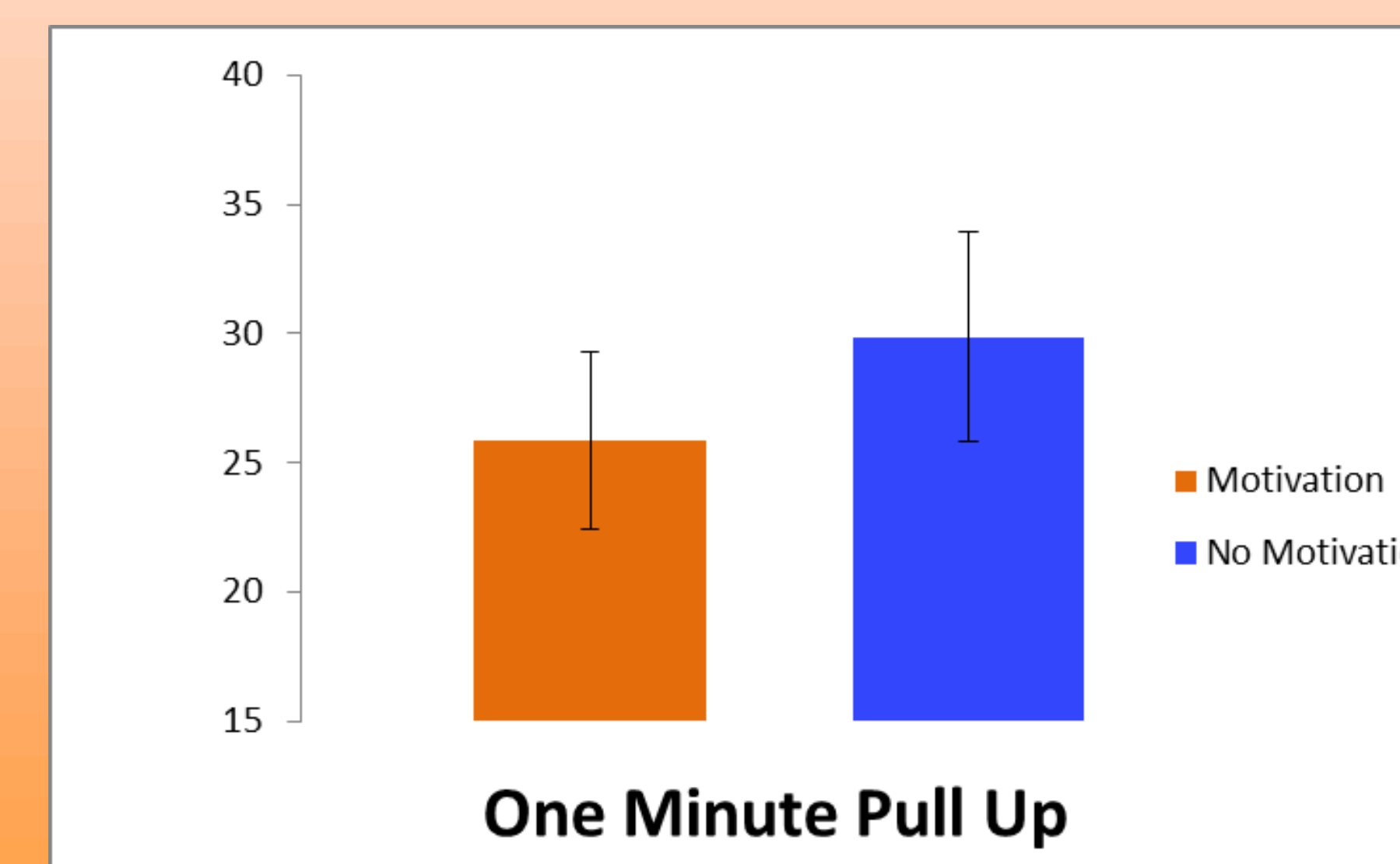


Figure 5: The relationship between verbal encouragement and one minute pull ups with standard error

Results (cont'd)

None of the four-field test significantly improved with verbal encouragement. The mean average for the 40 yard dash with and without verbal encouragement (4.92 \pm 0.31, 4.97875 \pm 0.32 respectively); Vertical jump with and without encouragement (26.5 in. \pm 5.08 in, 26.1 in \pm 4.2in.) , bench press (23.37 \pm 10.29, 23.25 \pm 11.18) and pull ups (25.87 \pm 9.7, 29.875 \pm 11.5). However there was a statistically significant difference ($p > 0.05$) in the heart rate when the subject ran the 40-yard dash with verbal motivation (138.5 \pm 11.67) and the vertical jump (90.25 \pm 10.6) then when they didn't receive verbal motivation (122.75 \pm 17.3; 99 \pm 9.56 respectively)

Conclusions

In closing, while most of the variables tested did show improvement, there wasn't a significant difference between the two days. Verbal encouragement is the most common way to motivate individuals, especially when they are pushing their bodies past it's limit during a strenuous exercise or competition. Fans at home games have been credited with changing the outcome of games by swinging momentum to the home team. The role of encouragement in maximal exercise has recently been explored in research settings. Some studies have concluded that encouragement affects performance on maximal exercise testing, while others studies contradict those findings. The phenomenon of home field advantage can help to explain why verbal encouragement can improve maximal performance. This study explored how verbal encouragement affects anaerobic field test. Eight subjects performed four different field test on two different days. The days in which they received motivation and didn't were randomized. Efforts were made to keep the testing environment as identical as possible for both days. All of the four different field test variables were used to measure performance. Because no significant differences were found, it is concluded that verbal encouragement had no significant affect on changing subjects' performance in anaerobic field test.