

## **The Effects of Skill Level on Distance and Heart Rate in Collegiate Tennis Players**

Dizdarevic S and Deike E

Department of Kinesiology; Texas Lutheran University; Seguin, TX

---

*Category: Undergraduate*

*Advisor / Mentor: Helbig, Casi (chelbig@tlu.edu)*

### ABSTRACT

The purpose of this experiment was to evaluate if skill level affects distance traveled and heart rate in tennis players in a collegiate match. Previous studies using professional tennis players have shown an increased distance for higher skill level players. Therefore, it was hypothesized that the higher level group would travel further in a match and have higher heart rates than the lower level group. Men (N=6) and women (N=6) from the TLU tennis team were observed for this experiment. Subjects were placed into either a higher level group (Group A) or a lower level group (Group B), based on their win percentage in competitive drills during practice. Subjects were observed in a total of twelve matches, with their total distance and heart rate noted at the end of each match. The first match of each player was used to compare the variables for the experiment. Two t-tests were used to compare distance and heart rate between the two groups. Significance was set at  $P < 0.05$ . Both tests showed no significant difference for distance and heart rate between Group A and Group B. Distance traveled and heart rates between males and females were also compared with t-tests and showed no significant difference. Therefore, the results signify that skill level does not influence distance traveled or heart rate in tennis players during a collegiate match. This study only included twelve subjects, which might have limited the ability to show a significant difference. Therefore, future studies should include more subjects to see if there is a true relationship.