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*Abstract*

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**Relationship between the isometric force of the dominant hand and the Body Mass Index of university students**

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ABSTRACT

**INTRODUCTION:** Strength is the neuromuscular capacity to overcome or counter resistances through muscular activity and is closely linked to all the motor actions that the human being develops, and to his body mass index. **OBJECTIVE:** To determine the level of correlation between body mass index (BMI) and the isometric strength of the dominant hand of university students. **METHOD:** The strength was evaluated with a TAKEI SCIENTIFIC INSTRUMENT 5401 dynamometer to 70 university students using a random sampling method using a descriptive transactional design. We obtained data that were processed with a bivariate correlation obtaining the Pearson coefficient. We used SPSS ver. 15. **RESULTS:** The studied age was  $23 \pm 1.9$  years, with a length of  $165.6 \text{ cm.} \pm 7.72$  for women and  $173.7 \text{ cm.} \pm 7.95$  men, as well as a weight in women of  $64.1 \pm 14.82 \text{ kg}$  and men  $82.3 \pm 14.72 \text{ kg}$ , which results in a BMI for women of  $25.01 \pm 4.405 \text{ m}^2/\text{kg}$  and  $25.06$  with  $\pm 4.398 \text{ m}^2/\text{kg}$  for men. On the other hand, the female isometry strength was  $3.08. \pm 0.613 \text{ Kg}$  and for men was  $3.68 \pm 0.839 \text{ Kg}$ . In females, there was not correlation between the BMI and isometric strength (Sig = .192). Contrary, in males, there was a significant and negative correlation grade between the BMI and isometric strength ( $r = -0,452$ ; Sig. = 0.035). **CONCLUSIONS:** In this study, it was observed that as BMI increases, strength does not grow. Therefore, other variables should be evaluated to understand what is related to the overweight or obesity of students.