

The purposes of this research were to invent the instrument for measuring the height of center of gravity (CG) ; and to measure the height of center of gravity in both male and female athletes of Thai national team. The data were analyzed and computed by using the Statistical Package for the Social Science Version-X : SPSS^x. The researcher ascertained the instrument validity by the method of concurrent validity ; and reliability by the method of test- retest reliability; and find the mean(x) and the standard deviation (S.D). A t-test was used to determine the significant difference of percentage of CG level between male and female athletes. Finally, the researcher computed the correlation between the percentage average of CG and age and height and weight by using Pearson Correlation Coefficient (r).

The results showed that

1. The instrument consisted of high validity (0.9947) and high reliability (0.9997).
2. The average level of CG in male athletes were at the 56.56 % and female athletes were at the 56.11 %. There was a significant difference at the .01 level.
3. The percentage of CG level did not correlate with age, height and weight at the significant level of .01.
4. The percentage of CG level in male and female athletes between individual and team, impact and nonimpact team, impact and nonimpact individual were not significant difference at level of .01.