

OPTIMAL GROWTH AND BIOMOTORIC ABILITY OF 12 YEARS OLD GROUP INDONESIAN FOOTBALL PLAYERS THROUGH Zn+Fe SUPPLEMENTATION

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Introduction

Understanding of relation body posture and fitness level in football player has not yet been well known. Intervention study among 40 football players of Makassar football School (MFS) in south Sulawesi Province had been conducted to figure out a possible mechanism. The aimed to examine the effect of Zn+Fe supplementation on optimalizing the increasing of body height well as biomotoric ability in 12 years old group of Indonesia football players

Methods

This randomized double blind pretest-posttest research specifically examined the discrepancies of the change in the increasing rate of body height as well as biomotoric ability between the targeted and the placebo group. The influence of Hb level and IGF-1 on body growth and biomotoric ability were also examined. A full of 20 participants in group A was supplemented by Zn+Fe for 6 months while other 20 in group B counterparts were given with placebo. All data related to bodyheight, bomotoric ability, nutrient supplementation, Hb level as well as IGF-1 level were recorded before and after intervention.

Result & Discussion

The result showed greater increasing in the level of Hb, IGF-1, body height, biomotoric ability: muscle endurance (sit-up test), and aerobic endurance (bleep test) among the targeted group up to 2.05%, 32.5%, 3.04%, 19.85% and 47.08% respectively, after supplemented by Zin+Fe for 6 months compared to that number in the placebo group (0.61%, 15%, 1.35%, 5.11% and 11.66% respectively). Moreover, the result demonstrated a positive correlation between the level of Hb and the increasing of body height among the participants ($r= 0.406$), ability to perform sit-up ($r= 0.361$) as well as aerobic capacity ($r= 0.325$). Similar result found in correlation between IGF-1 and the increasing rate of height ($r= 0.612$), ability to perform sit-up ($r= 0.385$) as well as aerobic capacity ($r= 0.392$)

Conclusion

Zn+Fe supplementation increase Hb dab IGF-1 level, optimize body growth and biomotoric ability in 12 years old group Indonesia football players.