

PENGARUH SUPLEMENTASI Fe + VITAMIN C + Cu TERHADAP KENAIKAN KADAR Hb DAN PRODUKTIVITAS PADA TENAGA KERJA WANITA DI PT MAYANG SARI KABUPATEN JEMBER

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VITAMIN C;PRODUCTIVITY

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ABSTRACT

The research is aimed to examine effects of Fe + Vitamin C + Cu supplementation towards the increase of Hb levels and its impacts to the productivity of female workers. This study is an experimental research using a Pretest-Posttest Control Group Design and randomized Double Blind design, with 36 female workers aged 20 to 40 years as the sample. The sample divided into three groups consisting of: the first group (12 women) who were given Fe + Vitamin C + Cu, the second group (12 women) who were given Fe + Vitamin C, and the third group (12 women) who were given Fe, as much as 2 (two) times a week for 2 (two) months. The measurement of Hb levels using Cyanmethemoglobin method, the measurement of physical fitness using the Harvard method of Step-Up Test, and the productivity measurement is conducted by measures the weight of tobacco produced by female workers for the whole day of work. Based on the result of Recall 2 x 24 hours on sample, it is obtained that the average of protein consumption is 35.04, iron is 12.26, vitamin C is 15.54, and Cu is 0.85. Supplement Fe + Vitamin C + Cu has significant influenced to the increase of Hb levels and the physical fitness. This is proved by the analysis of the delta Hb to the entire of group using Anova whereas the results were differ significantly ($p = 0.000$), while the analysis of the delta of physical fitness to the whole group using Anova were differ significantly ($p = 0.000$) for the entire group. Supplement Fe + Vitamin C + Cu do not have significant influence to the increase of productivity. The analysis of the delta in productivity using the Kruskal Wallis resulted that there is no significant differences ($p = 0.595$) between the groups. The Increase of Hb levels are significantly related to the improvement of physical fitness. This is known as the statistical tests, using Pearson correlation obtained a very clear result i.e. $p = 0.000$ with a correlation coefficient of 0.700. But the increase of hemoglobin levels is not significantly related to increase of productivity. This is known as the statistical tests, using Spearman correlation obtained a results i.e. $p = 0.341$ with a correlation coefficient of 0.163.

Key words: Fe, Vitamin C, Cu, physical fitness, productivity