Nutritional status and work productivity of female cigarette industrial workers in Kudus district, Central Java province

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Abstrak

ABSTRAK
The present study investigated the relationship of nutritional status and work productivity of Indonesian female industrial workers who engaged in light activity. Anthropometrics, hemoglobin (Hb), work productivity, physical activity and several socioeconomic data were collected from 230 female cigarette industrial workers.

Nutritional assessment of studied population showed that the average body mass index of studied population was 19.55 ± 2.33 kg/mz, which 41.3% of the workers were under nutrition which indicated by BMI below 18.5 kg/m2 and 40.4% were anemic while 13.9% of them were under nutrition and anemic.

BMI showed a significant quadratic regression with work productivity (p<0.05). A classification for chronic energy deficiency (CED) using BMI of 18.5 as a cutoff point was related to the functional parameter of work productivity. Workers whose BMI below 18.5 kg/m2 had work productivity about four percent lower than those whose BMI above 18.5. Female workers whose BMI ranged of 18.5 --22.5 kg/re had the highest work productivity among others.

Analysis of variance showed that anemic workers had significantly lower work productivity than the non-anemic workers (p<0.01). The anemic workers produced about five percent less output than the non-anemic workers. There was a linear regression between work productivity and hemoglobin level.

Multiple regression analysis showed that increases in Hb levels, lean body mass and experience were significantly associated with increased work productivity (p<0.01).

This study concluded that Hb, BMI and LBM were significantly related with work productivity. The better nourished workers as determined by BMI, LBM, and Hb levels were more productive than under-nourished workers also the more experienced workers had higher work productivity than the less-experienced workers.

