

Effectiveness of Influenza Vaccination on Absenteeism of Health Care Workers in Tertiary Hospitals in Perak, Malaysia

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ABSTRACT

Healthcare workers (HCWs) are at high risk of influenza infection and can easily spread the disease. Malaysia Ministry of Health has been introducing a free influenza vaccination program for HCWs. However, the uptake remains low due to the doubt in the effectiveness of the influenza vaccine. The objective of this study is to determine the effectiveness of influenza vaccination in reducing influenza-related work absenteeism among HCWs. A cross-sectional study was carried out in two tertiary hospitals in Perak. It involved 774 nurses and assistant medical officers who were selected using simple random sampling. The study used a self-administered questionnaire that contained a section on sociodemographic characteristics, uptake of the influenza vaccination based on the 2016/2017 influenza season and the number of sick days due to influenza symptoms in the year of 2017. The influenza vaccination uptake was 25.5%. A total of 136 (17.6%) HCWs reported taking sick leave in the past 12 months. Sick leave was reported more often by non-vaccinated HCWs (18.1%, mean 0.41 ± 1.25) than by vaccinated HCWs (16.2%, mean 0.27 ± 0.75) ($p = 0.3881$), although the difference was not statistically significant. However, the total number of workdays lost due to influenza among non-vaccinated HCWs was four times higher than that among the vaccinated group in the studied hospitals (225 days/year in the non-vaccinated group vs 53 days/year in the vaccinated group). This finding could motivate policy makers to strengthen the implementation of an influenza vaccination programme among HCWs and to encourage HCWs to be immunised against influenza.

KEYWORDS: influenza, vaccination, healthcare worker, prevalence, effectiveness

Effectiveness of Physical Activity Intervention Module on Physical Activity Level Among Overweight and Obese in Malaysian Armed Forces

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ABSTRACT

INTRODUCTION: About 18% of Malaysian Armed Forces (MAF) personnel are diagnosed with either hypertension, diabetes or coronary artery disease, while another 8% are obese. The rising prevalence necessitates intervention. **METHODS:** This is a single blinded randomized controlled trial among overweight and obese MAF personnel attending medical checkup in MAF hospital in Kuala Lumpur. An intervention module was developed to increase their physical activity level. Short version of International Physical Activity Questionnaire was used to measure physical activity in metabolic equivalent of task score (METs score), while blood pressure and body mass index (BMI) were also obtained. These parameters were measured at baseline and again at six months. Generalized estimating equations (GEE) statistical test were used to evaluate the effect of the intervention. **RESULTS:** Response rate was 100%. Most of participants were aged above 40 years, male, from Malay ethnic group, completed secondary education and had monthly income above RM4000. Most of the respondents were obese and had moderate level of physical activity at baseline. All variables compared between groups at baseline showed no significant difference. At six months, after controlling for covariates, the significant difference was only in METs score. The odds of having high METs score in the intervention group after receiving intervention was nearly 3 times higher than those in the control group, after adjusting for interaction between time and group as well as other covariates (aOR:2.908, 95%CI: 1.323, 6.391, $p=0.008$). **CONCLUSION:** Intervention was effective in increasing physical activity among overweight and obese military personnel.

KEYWORDS: Physical Activity Intervention, Malaysian Armed Forces, overweight, obese