

Measured outdoor air flow and Carbon dioxide level was at negative levels when it should be at least 20cfm and the Measured Air Change per Hour (ACH) was 0.25, well below the recommended 20ACH for a similar workplace. The whole ventilation system for the record office should be re-inspected to rectify weaknesses in the system (e.g. blocked air shafts, modifications to the existing system etc.). IAQ monitoring and regular maintenance of the Air Handling Unit of the hospital is needed to ensure proper functioning of the system. Awareness and training in IAQ to all the staff of the hospital should be carried out on a regular basis. Sick building syndrome may have contributed to the health effects, thus, affecting productivity. Hence, the workplace needs to improve its ventilation system and perform regular monitoring in order to ensure good indoor air quality.

PREVALENCE OF CARDIOVASCULAR RISK FACTORS AMONG SABAH HEALTH OFFICES EMPLOYEES IN 2008

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Introduction: Prevalence of cardiovascular risk factors is increasing among the general population, but little is known about employee's risk factor who works in the health office. The objective was to assess the prevalence of cardiovascular risk factors among health office employees and relationship to other contributing factors. **Method:** Cross sectional data were obtained from Feb-March 2008 as part of the non-communicable disease employee screening program. Universal sampling method was used. 341 employees were agreed to participate in Sabah state health offices. Data was collected through a questionnaire on risk factors, anthropometric and blood pressure measurement, random blood glucose and cholesterol analyses. Data was analyzed using SPSS version 15.0 and presented by descriptions, univariate and multivariate analyses for significant risk factors.

Results: The response rate was 96.6%. The prevalence of raised blood pressure (17.9%, [95%CI:14.1-22.5]), blood cholesterol (21.7%, [95%CI:17.5-26.5]), blood glucose (10.0%, [95%CI:7.1-13.8]), smoking (17.3%, [95%CI:13.5- 21.8]), physical inactivity (29.6%, [95%CI:24.9-34.8]) and drink alcohol (9.7%, [95%CI:6.9-13.5]) were lower than general population studies in the National Morbidity Survey Report III and Malaysian NCD surveillance of 2006. The prevalence of Overweight (BMI \geq 23 kg/m² ASIAN Classification) was 62.2% [95%CI: 61.6-72.2]. Out of 62.2%, 36.4% was Pre-Obese (BMI 23.0-27.4 kg/m²), 24.0% was Obese1 (BMI 27.5-34.9 kg/m²), 1.5% was Obese2 (BMI 35.0-39.9 kg/m²) and 0.3% was Obese3 (BMI \geq 40.0 kg/m²). All these cardiovascular risk factors, the prevalence were higher in older age group but was not statistically significant except for overweight and raised blood pressure ($p < 0.05$). The prevalence of smoking habit was higher in younger age group and statistically significant ($p < 0.05$). The result of univariate analysis showed that overweight (BMI > 23 kg/m²) was significantly ($p < 0.05$) associated with older age group category [(< 28 : - reference), (28-35: 1.9, [95%CI:1.0-3.8]), (35-45: 2.3, [95%CI:1.2-4.3]), (> 45 : 3.4, [95%CI:1.7-6.6])], male gender 2.2, [95%CI:1.4-3.6]), drink alcohol 3.9, [95%CI:1.3-11.6) and smoking habit 2.2, [95%CI:1.1-4.4). Multivariate logistic regression revealed male gender and older age group were associated with overweight, adjusted odds ratio (AOR) 2.2, [95%CI: 1.3-3.6) and 1.1, [95%CI: 1.0-1.1) respectively. Physical inactivity was not associated with overweight 1.3, [95%CI: 0.8-2.2]. Combinations of cardiovascular risk factors (RF), 17.0%, [95%CI: 13.2-21.5] have no cardiovascular risk factors. This means that the majority (83%) of them have at least one risk factor. Of this 83%, 32.6%, [95%CI:27.7-37.9] have one RF, 25.2%, [95%CI:20.8- 30.2] two RF, 17.9%, [95%CI:14.1-22.5] three RF, 5.3%, [95%CI:3.3-8.4] four RF and 2.1%, [95%CI:4.8-10.6] have five or more RF. But these risk factor combinations were lower when compared to the general population studies in the Malaysian NCD surveillance of 2006.

Conclusion: As the employees exposed to health related promotion and prevention activities, their cardiovascular risk factors were lower compared to the general population. However, Overweight problems need to be resolved urgently by optimizing continuous employee health monitoring and appropriate weight management strategy. Even though male gender and older age group were the contributing factors of overweight problems, further study about diet and other environmental factors or genetic predisposition will benefit current problems. The reason physical inactivity was not associated with overweight probably due to health awareness. Other cardiovascular risk factors also need to be monitored and reviewed accordingly.