

Predisposing factors towards potential metabolic syndrome among healthcare workers in Kota Bharu District Health Office, Kelantan

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ABSTRACT

Introduction: Metabolic syndrome (MetS), or “Syndrome X,” is characterised by clustering of cardiovascular risk factors, namely, central obesity, elevated blood pressure, elevated plasma glucose, and dyslipidaemia. Several diagnostic criteria for MetS continued to emerge over the last few decades that recognised the variety of values in different populations. Workers involved with sedentary work may be predisposed to metabolic syndrome. The study objective was to determine the prevalence of metabolic syndrome risk factors and its predisposing factors among workers at the administrative and inspectorate unit in the Kota Bharu District Health Office. **Material and Methods:** The study design was a cross-sectional study using secondary data obtained from the Kota Bharu District Health Office KOSPEN WOW registry book. Health screening was carried out between 21st May to 31st May 2023 involving workers from the administrative and inspectorate unit. Harmonised definition from a Joint Interim Statement issued in 2009 was used to define the criteria of metabolic syndrome. Workers’ age, waist circumference, height, weight, body mass index, blood pressure, fasting blood sugar, total cholesterol and depression, anxiety and stress test score were recorded. Workers with a minimum of two criterias were considered at high risk of potentially developing metabolic syndrome though the actual Harmonised Definition of Metabolic Disease must be at least three out of five criteria. Descriptive analysis, simple and multiple logistic regression were performed using SPSS version 26 software. **Results:** Secondary data was obtained from 141 Kota Bharu District Health Office workers from the administrative and inspectorate unit. The mean (SD) age of the workers was 36.4 (8.2) years old, were predominantly male (59.6%), from the inspectorate unit (66.7%) and non-smokers (94.3%). Almost 17% of the male workers had waist circumferences of more than 90cm while 57.9% of the female workers had waist circumference of more than 80cm. Around 40% of the workers had Body Mass Index (BMI) between 25.0 to 29.9, 16.3% had BMIs of more than 30 and 12.1% had fasting blood sugar of more than 5.6 mmol/L. The prevalence of blood pressure 130-139/85-89 was 55.3%. Mental health screening using the Depression Anxiety Stress Scales-21 showed 100% normal results. The predisposing factors for potential metabolic syndrome were waist circumference (AdjOR: 1.221, 95% CI: 1.042, 1.431), systolic blood pressure (AdjOR: 1.128, 95% CI: 1.052, 1.210) and fasting blood glucose (AdjOR: 3.887, 95% CI: 1.415, 10.683). **Conclusion:** Workers involved with sedentary work who were at risk for metabolic syndrome require urgent KOSPEN WOW programme intervention. Comprehensive strategies and active participation by both workers and organizational commitment are vital to prevent metabolic syndrome. The registry book only captures data on total cholesterol, there is a need to detail out the actual components of triglyceride and high-density lipoprotein for every worker to detect those who fulfil the Harmonised criteria and those at risk in developing metabolic syndrome.