

## **Effectiveness of physical activity intervention among government employees with metabolic syndrome**

### **ABSTRACT**

**Background/Objective:** Our study aimed to assess the effects of physical activity interventions via standing banners (point-of-decision prompt) and aerobics classes to promote physical activity among individuals with metabolic syndrome. **Methods:** We conducted a cluster randomized controlled intervention trial (16-week intervention and 8-week follow-up). Malaysian government employees in Putrajaya, Malaysia, with metabolic syndrome were randomly assigned by cluster to a point-of-decision prompt group (n = 44), an aerobics group (n = 42) or a control group (n = 103) based on sample size calculation formula. Step counts were evaluated by Lifecorder e-STEP accelerometers for all participants. Metabolic syndrome was defined according to the 'harmonizing' definition, in which individuals who have at least three of the five metabolic risk factors (waist circumference, high-density lipoprotein cholesterol, triglycerides, fasting glucose levels, systolic and diastolic blood pressure) will be classified as having metabolic syndrome. A total of 80% of the enrolled government employees with metabolic syndrome completed the programme. Data were analyzed using SPSS for Windows (version 20, SPSS, Chicago, IL). **Results:** There were significantly higher step counts on average in the aerobics group compared to the control group over assessments. Assessments at baseline, post-intervention and follow-up showed a significant difference in step counts between the intervention and control groups. The greatest reductions in the proportions of individuals with metabolic syndrome were observed in the aerobics group with a reduction of 79.4% in the post-intervention assessment compared to the assessment at baseline. **Conclusion:** The findings of this study suggest that physical activity intervention via aerobics classes is an effective strategy for improving step counts and reducing the prevalence of metabolic syndrome.

**Keyword:** Anthropometry; Exercise; Government; Metabolic syndrome X; Physical examination