

# **The effect of remote health management on the improvement of metabolic syndrome among health professionals during the COVID-19 pandemic**

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## **Background and objective**

Due to shifts, on-duty or high-pressure work patterns, irregular working hours, and busy work, medical workers in the workplace cause many problems such as insufficient physical activity, sleep disorders, and dietary changes, which affect the quality of life and physical and mental health. The outbreak of COVID-19 epidemic in 2019 has led to the restriction of physical activity and exercise areas. To investigate the use of wearable devices by medical workers in a southern medical center in Taiwan during the epidemic period, we're planning to track workers with metabolic syndrome for 3 years and 36 weeks in 12 weeks per year to monitor the results of daily walking, whether it can effectively improve the intervention effect of metabolic syndrome

## **Methods/intervention**

During January 1, 2019 to October 31, 2022, 547 employees of a medical center between the two groups with metabolic syndrome who participated in the activities and those who did not participate in the activities were offered by online management and intelligent health promotion activities, and analyzed the improvement effect of metabolic syndrome in the two groups. Their demographic data and medical history were collected, and the comparison of health examination data between 2019 and 2022 was described. The risk factors of significant health promotion activities were identified by analyzing data through chi-square test, independent sample t-test, paired sample t-test and multivariate logistic regression.

## **Results**

The group with participation in activities obviously has statistical significance compared to the group without participation in activities. Female, age below 50 years old, no shift work, administrative unit, college education had higher statistical significance with participation in activities. In multivariate analysis, female, age below 50 y/o, no shift work, administrative unit, college education, improvement of pre and post abdominal circumference and high-density lipoprotein all showed significant positive correlation factors.

## **Conclusions/lessons learned**

In Taiwan, during the post-epidemic era of COVID-19, medical workers with metabolic syndrome who participated in health promotion activities showed better outcomes than those who did not. Keeping a lasting and effecting remote health management can improve metabolic syndrome to a better physical and mental status.