**HOW EFFECTIVE IS LIFESTYLE INTERVENTION IN WEIGHT MANAGEMENT AND DEPRESSION IN ADULTS WITH METABOLIC SYNDROME**

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*Background*: Metabolic syndrome (MetS) is a cluster of cardiometabolic risk factors. With the global pandemic of overweight, MeS has been increasingly prevalent. Moreover, MetS has adverse impacts on physical and psychological well-being of individuals. Lifestyle intervention is regarded as the first-line intervention for MetS.

*Objectives*: This study examined the effectiveness of a three-month lifestyle intervention program (LIP) on weight management and depression in Chinese MetS population.

*Methods*: This study was a randomized control trial and recruited adults with MetS from a general hospital in Shandong, China. The control group received usual care from the hospital. In addition to usual care, the intervention group received the LIP, including an educational booklet, one session of education, and six telephone follow-ups after discharge. Body weight and depression (Depression subscale of Hospital Anxiety and Depression Scale, HADS-D) were measured at baseline (T0), one month (T1) and three months (T2). The effect of the LIP was tested by the generalized estimating equations (GEE) model. *Results*: One hundred and seventy-three patients with MetS participated in the study with 86 in the intervention group and 87 in the control group. The participants had a mean body weight of 74.74 Kg (standard deviation, SD = 7.46), and a mean score of 4.22 (SD = 3.11) in HADS-D. During the 3-month study, the participants demonstrated continuous decrements in body weight and depression. Moreover, the GEE revealed significant interaction (group by time) effects on body weight and depression at both T1 and T2 (all p values < 0.05).

*Conclusion*: The LIP was effective in weight management and reducing depression in Chinese adults with MetS. Lifestyle interventions could be integrated in daily practice to improve the quality of care for patients with MetS.