

EFFECTS OF HIP ON CARDIOMETABOLIC RISK PROFILES FROM GUANGXI NORMAL UNIVERSITY IN CHINA

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BACKGROUND

Health intervention program (HIP) based on diet and lifestyle modifications had been shown to improve cardiovascular risks. The effects of such program on a variety of cardiometabolic outcome measures conducted in a strict analysis remained relatively unexplored.

PURPOSE

To investigate whether the health promotion implementation may lead to effective and significant effects on cardiometabolic risk profiles.

Materials and methods: A total of 1,868 participants (mean age: 41.1 ± 23 years, 70.8% male) underwent annual health survey from our University Hospital and our lab. We implemented health intervention program (HIP) in which diet and lifestyle modifications including smoking cessation and advised physical activities were introduced. We further studied the effects of HIP on several cardiometabolic outcome measures including Framingham, metabolic scores and renal function in terms of Egfr with a mean follow-up period of 30.7 months. Propensity score (PS) matching (HIP vs non-HIP group) was used to avoid effects of case selection bias.

RESULTS

Totally 820 (410 subjects for each group) left after PS matching protocol (both HIP and non-HIP group). The HIP group showed significant decline of waist circumference (-1.27 ± 0.71 , $p = 0.019$), post-prandial glucose (-6.68 ± 2.06 , $p = 0.001$), and total cholesterol level (-4.39 ± 2.22 , $p = 0.04$), with borderline increase in eGFR (1.77

± 0.86 , $p = 0.062$) after an average of 1.87 ± 1.12 year follow up period. Exercise behavior significantly increased for those who received HIP when compared to the non-HIP group (43.7 vs 51.8 %, $p = 0.015$). PS matching and difference-in-difference (DID) analysis further confirmed the beneficial effects of ATP III reduction by HIP (-0.37 ± 0.07 , $p < 0.05$).

CONCLUSION

We demonstrated in our study that several cardiometabolic profiles can be substantially improved after health intervention introduction at the health evaluation center, supporting the beneficial evidence of such health intervention programs implementation based on primary prevention view points.

KEY WORDS

Health promotion, Cardiometabolic profiles, Propensity matching, Primary prevention.

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