The Effects of E-Health Management for Weight Control and Metabolic Syndrome Abnormalities in Adolescent Girls

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Background
Obesity is increasing at an alarming rate among adolescents.
Adolescent girls are more likely than boys to have sedentary lifestyles, low levels of physical activity, unhealthy weight control behaviors, and disordered eating behaviors.

Objectives
The purpose of this study investigated the effects of a 6-month health management platform with Internet-based (HMPI) intervention in overweight adolescent girls in Taiwan.

Methods
- This study was conducted at two schools using a parallel-design, control trial.
- The evaluation measurements were as follows: BMI, waist circumference (WC), BP, HDL, triglyceride and fasting glucose, 6-month follow-up were estimated using generalized estimating equations (GEE) for repeated measures.
- The platform framework included "combat my health diary, super race, the mood scale, inspiration stations, asking and consulting experts, e-health books, theme zones, coupon collections, hate oil, ventilation room, Facebook, Fan group connection.

Results
- On average, the body weight of the experimental group than the control group in the 6-month decreased 2.460 Kilogram, the results were statistically significant (p <.05).
- The 6-month HMPI program had positive effects on weight control. Experimental group had significantly lost more mean body weight (β = -1.892, p < .001), mean waist circumference (β = -4.134, p < .001) and increased more mean HDL levels (β = 3.552, p = .005).
- The frequency of using the food and exercise diaries was negatively correlated to changes in the risk factors for metabolic syndrome, but was positively correlated to changes in HDL levels.

Conclusions
The HMPI intervention had positive effects on reserve the markers of metabolic syndrome in overweight adolescent girls. This model is the most effective self-health management method for young people.