

Effects of Obesity management program : systematic review and meta-analysis

Hyo Young Lee, Seon-Ja Rhee*

Institute of Health and Environment, Graduate School of Public Health,
Seoul National University

Department of Health Science & Services, Graduate School of Public Health,
Seoul National University *

Background

Overweight and obese people have increased, obesity management program has generated much concern in Korea. Many types of obesity management program were operated, aimed at reducing weight, BMI, body fat percentage and so on

Method

Databases were systematically searched for published data in Korea. It were KISS (Korean studies information services system) and KERIS (Korean Education research information system), which were major literature search systems for all academic fields in Korea. Total 114 studies were initially identified, of which 21 satisfied our inclusion data<Figure 1>.

The effects of obesity management program was assessed on the results in weight, BMI (body mass index), HDL (high density lipids), body fat percentage, self-efficacy.

Effect size estimated on the equation of $M1 - M2 / S_p$, where M1 was mean of the experimental group, M2 was the mean of control group, and S_p was the pooled standard deviation. Magnitude of effect size was interpreted by using Cohen's definition. Cohen described small, medium, and large effect sizes as 0.2, 0.5, and 0.8 respectively

Result

The studies about obesity management program were the most published in 2005(26.1%). Obesity management program was popularly operated as the type of 12 weeks intervention, exercise intervention(52.4%), quasi-experimental study(85.7%).

Ten studies reported significant effects on weight, and nine studies reported significant effects on BMI and HDL .Only five and three studies reported significant

The studies

- 1) Included in the fields of public health, medicine, pharmacy, physical education, and food and nutrition science
 - 2) Published from 1995 to 2006.
 - 3) Database searched were KISS and KERIS
 - 4) Registered in Korea research Foundation
 - 5) Keywords of studies were obesity, overweight, weight control, over nutrition
 - 6) Implementation of an intervention designed to prevent and manage obesity.
 - 7) Possession of a control or comparison group that did not receive an organized intervention
 - 8) Excluded duplicated data, duplicated study population and surgical interventions
 - 9) The numbers of subjects were over 10
 - 10) Inclusion of some quantitative outcome measures which were compared with outcomes in other studies.
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<Figure 1> Inclusion criteria for study design

effects on body fat percentage and self-efficacy respectively.

The effects of each outcome were generally significant when the studies included these elements, intervention over 10 weeks, evaluation over 3 times, a comprehensive program (exercise, nutrition education, behavior modification) and reinforcing factors (self-monitoring, group discussion, one's goal setting, and etc.)

Objective

This study was conducted to review the features of studies in obesity management program and systematically assess the effects which were published from 1995 to 2006 in Korea

Conclusion

Effective obesity management programs should be contained essential elements such as interventions over 10 weeks, evaluation over 3times, a combined program (exercise, nutrition education, behavior modification), and contained the reinforcing factors like as self-monitoring, group discussion, counseling, problem discovery, and one's goal setting.

Objectives of obesity management program must be set out the evidence at the beginning. The participants should be registered, educated and evaluated by continuous obesity management programs.