Diet and/or Exercise Treatment for Weight Loss in Overweight and Obese Women after Childbirth

Akademisk avhandling

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av

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The thesis is based on the following papers:

I. F. Bertz, H. K. Brekke, L. Ellegård, K. M. Rasmussen, M. Wennergren, A. Winkvist.
Diet and exercise weight loss trial in lactating overweight and obese women.
American Journal of Clinical Nutrition 2012;96:698-705

II. F. Bertz, A. Winkvist, H. K. Brekke.
Sustainable weight loss among overweight and obese lactating women is achieved with an energy reduced diet in line with current recommendations.
(Manuscript)

III. F. Bertz, C. Sparud-Lundin, A. Winkvist.
Transformative Lifestyle Change: key to sustainable weight loss among women in a postpartum diet and exercise intervention; a substantive grounded theory.
(Submitted for publication)

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AIM: The aim of the research presented in this thesis was to evaluate whether, dietary behavior modification treatment (D), or physical exercise behavior modification treatment (E), or the combination of both (DE), provide short and long-term weight loss compared to control (C) among overweight and obese lactating women, and if so how.

METHODS: At 10-14 weeks postpartum, 68 lactating Swedish women with a pre-pregnancy body mass index of 25-35 were randomized to 12 weeks of treatment or control. The study variables were measured at baseline, after the intervention, and again at a 1-year follow-up, 9 months after treatment termination. A total of 29 interviews were also made.

RESULTS: Weight changes (kg) after the intervention and 1-year follow-up, respectively, were -8.3 ± 4.2 and -10.2 ± 5.7 in D, -2.4 ± 3.2 and -2.7 ± 5.9 in E, -6.9 ± 3.0 and -7.3 ± 6.3 in DE, and -0.8 ± 3.0 and -0.9 ± 6.6 in C. The main effects of D, but not of E, on weight were significant at both times ($p<0.001$). Weight loss was mainly adipose tissue in all groups. At baseline the women reported a typical Swedish diet. The D treatment led to reduced intake of energy, fat and carbohydrate. The proportion of sugar was reduced, whereas complex carbohydrates and fiber were increased. The women did not reach recommended levels of vitamins A and D, folate, and iron, with no difference between treatments. Based on the interviews a substantive theory of achieving sustainable weight loss in the specific context was developed. The women needed a 'Catalytic Interaction' from the health care provider, to mobilize and support their own resources. 'Transformative Lifestyle Change' was the key to sustainable weight loss. It comprised a journey towards gaining lifestyle control, consisting of seven stages leading to initiation, implementation, identification with, and maintenance of change.

CONCLUSIONS: Dietary treatment, with or without exercise treatment, provided significant and clinically relevant weight loss among overweight and obese lactating women, and it was sustained at 9 months after treatment. Further research will be needed to evaluate the effectiveness in the health care setting. Weight loss was achieved with a diet in line with current official recommendations, indicating its usefulness for this purpose. A supplement may be useful to reach recommended intake of certain micronutrients. A successful weight loss depended on a Catalytic Interaction with the health care provider, and on the Transformative Lifestyle Change-process. This theory may be useful in the design and evaluation of weight loss treatments.

Keywords: weight loss, overweight, postpartum, lactation, diet, exercise, behavior modification, DLW, body composition, RCT, Grounded Theory

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