

## Can Lifestyle Seminars and Self-Help Groups Contribute to Sustained Weight Loss?

Adolfsson B<sup>1</sup> and Lundqvist-Persson C<sup>1,2\*</sup>

<sup>1</sup>Skaraborg Institute for Research and Development, Skövde, Sweden

<sup>2</sup>Department of Psychology, Lund University, Sweden

\*Corresponding author: Cristina Lundqvist Persson, Research Leader, Ass.Professor Lic.Psychologist/Lic.Psychotherapist, Skaraborg Institute for Research and Development, Stationsg. 12, Skövde, 54130, Sweden, Tel: +46-500-478371; Fax: +46-500-478392, E-mail: [cristina.lundqvist-p@vgregion.se](mailto:cristina.lundqvist-p@vgregion.se)

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### Abstract

There is a worldwide increase in the prevalence of overweight and obesity, a serious problem with secondary negative effects on health and life quality.

This intervention study was conducted to evaluate whether lifestyle seminars and self-help groups could improve and sustain weight loss.

Fifteen people between the ages of 35-73 with a BMI  $\geq 30$  kg/m<sup>2</sup> participated in a 2-step lifestyle intervention program. Step 1 consisted of 12 consecutive weeks of lifestyle seminars with parallel physical activity in a gym. Step 2 consisted of meeting with a self-help group every week for 6 months.

We found that sustained weight loss was related to deeper awareness of the emotional reasons for eating, understanding that eating was a means to temporarily reduce unpleasant emotions. This was followed by changed lifestyle. Sustained weight loss was also related to weight loss of more than five percent at the end of the lifestyle seminar but not to the background variables, sex, age, marital status, education or occupational status.

The results from this small group of participants indicate that such type of community based intervention could enhance weight reduction and promote maintenance of weight loss which warrants further studies.

**Keywords:** Weight loss; Lifestyle; Self-help groups; Excessive eating

### Introduction

Over the past few decades there has been a worldwide increase in the prevalence of overweight (body mass index (BMI)  $\geq 25$  kg/m<sup>2</sup>) and obesity (BMI  $\geq 30$  kg/m<sup>2</sup> or a waist circumference  $\geq 88$  cm (women) or  $\geq 102$  cm (men)). These increases are regarded to be the result of changes in lifestyle for example, sedentary work and social environment and are not thought to be explained solely by availability of food or genetic factors [1]. For instance, an association has been noted between the prevalence of overweight and obesity and low education and income levels [2] and emotional stress is considered to be one of the main reasons of obesity development in humans [3,4].

In Sweden around 57 percent of men and 42 percent of women are overweight or obese [5]. The prevalence of overweight and obesity among children and adolescents has doubled approximately every 15<sup>th</sup> year over the last 35 years [6].

A sustained weight reduction of five percent in combination with increased physical activity and improved dietary habits has been recognized to result in significant health benefits and decreased risk of type 2 diabetes, coronary heart disease (CHD) and cancer [7-9]. However, neither temporary weight loss nor different combinations of fat, protein and carbohydrate intake levels have been found to affect the sustainability of weight loss [10]. What has been shown to be

important factors to succeed with a sustained weight reduction are for example, continued moderate intake of calories [11] and regular physical activity [12].

Jackson noted that patients need to solve everyday problems in order to achieve sustained changes in lifestyle [13]. Adolfsson et al. suggested using a problem-solving model for this purpose. In this model the person identifies a behavioral goal, reflects on obstacles reaching the goal and formulates a plan to remove the obstacles [14]. Obesity has been compared to chronic morbidities such as high blood pressure and type 2 diabetes and, as with these diseases, prolonged treatment may be necessary in order to achieve sustained weight loss without relapse to former behaviors [15].

The above findings highlight the complexity of obesity and the importance of not just focusing on weight loss and weight reduction programs. Furthermore, the high prevalence of obesity and associated health care costs provide an incentive to look for cost effective methods to support sustainable weight loss.

One way to achieve a behavioral change may be through self-help groups and support programs that provide peer support, which have been shown to be successful in sustaining behavior changes after intensive behavior-modifying treatments [16].

Self-help groups are "small voluntary group structures for mutual aid and the accomplishment of a special purpose" [17]. Self-help

groups can be used as a support system and health promotion strategy outside or inside professional healthcare settings [18].

Self-help groups and self-administered programs may be viable alternatives. As far as we know there are no self-help groups included in any weight reduction program in Europe.

## Aim

The overall aim of this study was to evaluate whether a treatment model consisting of lifestyle seminars and self-help groups could improve and sustain weight loss for a group of persons with overweight. Furthermore, we wanted to know the causes of overweight as formulated by the participating persons.

## Materials and Methods

This is an intervention study that entailed life-style seminars and the self-help groups with follow up after 6 and 12 months.

The participants were recruited through primary health care centers, physical fitness centers and the University College in a medium sized town in Sweden where information sheets were distributed at these places. The inclusion criteria were BMI  $\geq 30$  kg/m<sup>2</sup>, age  $\geq 30$  years and exclusion criteria were pregnancy or eating disorders.

First fifteen individuals who agreed to participate in the study were selected. The participants received oral and written information about the study at an introductory group meeting and if they still agreed to participate they signed an informed consent form at the subsequent individual interview.

Participants' characteristics were collected with questionnaires.

Body weight was checked before and after the lifestyle seminars and after the self-help groups.

Seminar number	Issue
1	Feelings and experiences from being obese
2	Nutrition and eating habits [1]
3	Physical activity (theory) [1]
4	Motivation
5	Setting goals and making a plan
6	Problem solving
7	Stress and coping
8	Hunger and craving
9	Social support and communication
10	Nutrition and eating habits [2]
11	Physical activity (theory) [2]
12	A sustained behavior change, risky situations and overcoming relapses

**Table 1:** Issues addressed during the lifestyle seminars.

## Semi-structured interview

The semi-structured interviews were carried out after the intervention. The way the participants reasoned around their overweight was explored as well as how the life style seminars and the self-help group sessions had affected their weight and lifestyle. The interviews were conducted in a conference room at the University College. Four broad, open-ended questions with follow up questions included: Can you tell me a little about your overweight? What would you say made you overweight? How did you experience participating in this program of life style seminars and self-help groups? How did the participating affect your weight? The interviews lasted for about one hour and were tape recorded.

## Intervention

The whole intervention program lasted for one year and consisted of two parts. The first part consisted of 12 lifestyle seminars and physical activity in a gym. The groups met for 1½ hours once a week over 12 weeks at the University College for the seminars. The problem-solving model [14] was used during the seminars and issues recommended by the World Health Organization (WHO) for sustained weight reduction were addressed during the seminars (Table 1). Self-help material on current issues was handed out in order to complete the participants' individualized manuals for weight loss.

The same routine was followed during all seminars. Each seminar started with the participants reflecting on and sharing their experiences from the last week (15 min) followed by a short lecture on the scheduled subject (30 min). The participants were seated in groups of two to four. Worksheets on the present topic were used to facilitate individual reflections and personal relevance of the present issue. The participants were encouraged to reflect on their own lifestyle and the issue (30 min). The seminars ended with sharing plans on how to increase well-being the subsequent week (15 min).

In addition to the lifestyle seminars the participants were engaged in physical activity at least three times a week at a nearby fitness institute.

The lifestyle seminars were followed by self-help groups with the purpose of supporting the participants' weight reduction and lifestyle changes. The self-help groups met every week for half a year. The meetings lasted two hours and took place in the same location as the lifestyle seminars. For the first three weeks the group members were introduced to the self-help group activity by a facilitator, their former group leader. Thereafter the participants continued to meet without the facilitator, however the facilitator could still come at their request.

The meetings were conducted according to an established model for self-help groups and personal development [19]. The meeting started with one of the participants welcomed the other group members. Then followed a "round" where the participants shared experiences from the previous week. During the "round" the participants were not allowed to interrupt each other or give instant feedback or advice. This policy was used in order to give everybody a chance to reflect. After 45 minutes there was a coffee break with opportunities to give feedback and advice to the other group members. Before the meeting ended everybody reflected on and formulated what they would focus on during the forthcoming week to increase their well-being.

## Analysis

The interviews were transcribed and analyzed with deductive content analysis. A deductive approach is based on an earlier theory or

model and therefore moves from the general to the specific. The analysis is used when the structure of analysis is operationalized on the basis of previous knowledge and the purpose of the study is to test a theory [20,21]. There are no systematic rules for analyzing data; the key feature of all content analysis is that many words and meaning units from the text are classified into much smaller content categories [22,23]. The unit of analysis could be a word or a theme [24]. According to Robson researchers are guided by the aim and research question of the study in choosing what content they analyze [25]. The deductive content analysis may involve testing categories, concepts, models or hypotheses [26].

The interviews were analyzed separately and together by the authors and a consensus achieved on categories and themes. The results of this type of analysis provide insight on the meanings of the categories which are described through subcategories [26].

## Ethics

The study was approved by the Regional Ethical Review Board in Gothenburg, Sweden.

## Results

Fifteen participants started the program. They were divided into two groups, eight participants in group 1 and seven in group 2. Three participants dropped out during the lifestyle seminars, one from group 1 and 2 from group 2. The reasons cited for leaving were failure to lose weight and lack of time.

The 12 participants' age varied from 35 to 73 years (median age 54 years), eight of them were married and three were single, six had a post-secondary education, four were retired, six were working full- or part time and one was unemployed (Table 2).

	Sex F/M	Age (yrs)	Marital status	Education	Education
1	c	73	Married	Elementary school	Retired
2	F	57	Married	Elementary school	Working part time
3	F	54	Single	Secondary school	Working part time
4	F	56	Single	Post-secondary education	Retired (early)
5	F	43	Married	Secondary school	Retired (early)
6	F	51	Married	Post-secondary education	Working full time
7	F	58	Married	Secondary school	Retired (early)
8	F	63	Married	Post-secondary education	Working part time
9	M	38	Single	Post-secondary education	Unemployed
10	F	44	Married	Post-secondary education	Working full time
11	F	35	Married	Post-secondary education	Working full time
12	M	55	Married	Elementary school	Working full time

**Table 2:** Participants' background variables.

After the lifestyle seminars another participant in group 2 dropped out. Thus 11 participants, seven in group 1 and four in group 2, continued with self-help groups. One by one the group 2 participants stopped attending the group sessions citing lack of time and at towards the end of the self-help group sessions also small group size was the reason for leaving. Regardless, the participants in group 2 still agreed to continue with weight assessment and they also participated in the final interview. All the seven persons from group 1 completed the self-help groups.

## Weight

The results of the weight assessment are presented in Table 3. After the lifestyle seminars four participants had a weight loss of more than 5%, 6 participants had a weight loss between 0.8% to 3.6% and two increased their weight. After the self-help group the participants with a weight loss of more than 5% not only sustained their weight loss, but increased it. Compared to baseline weight before lifestyle seminars 10 of 11 participants had decreased their weight. The weight loss was not

related to any participants' background variables mentioned above (Table 3).

## Experiences of the intervention

All participants reported emotional reasons, such as feelings of loneliness, anxiety, stress, for overeating. However, those who lost  $\geq 5\%$  of their initial weight after the lifestyle seminars had got a deeper understanding of the reason why they ate. They understood that their eating was a means to temporarily reduce unpleasant emotions. They managed, after the lifestyle seminars, to decrease their habit of using food to handle or soothe unpleasant emotions. *"I have lost quite a lot of weight I think. I am satisfied, but intend to lose even more, now I know why I gained weight"*.

Furthermore, three of four had also engaged in increased physical activity and somebody mentioned both physical activity and changed eating habits. *"In order to lose weight I have increased the physical activity and have now also healthier eating habits"*.

But few of the participants reported change in dietary habits. Someone had increased their intake of vegetables and another had decreased the intake of cookies and candies.

The weight development during the program differed among participants. Even the participants who did not lose weight became more conscious of which habits to change in order to achieve weight loss:

*"I experience a difference compared with how it used to be. Now, when I see that the weight has increased, I do not panic...I simply take the weight gain as a message that I have to change my behavior and go back to the healthy lifestyle".*

Group/Subject	Sex	Age (yrs)	Height (cm)	Weight (kg) <sup>1</sup>	Weight (kg) <sup>2</sup>	Weight change (%) <sup>3</sup>	Weight (kg) <sup>4</sup>	Weight change (%) <sup>5</sup>
<b>Group 1</b>								
1	F	73	160	96.7	92.9	-3.9	94.1	-2.7
2	F	57	158	88.1	83.3	-5.4	80	-9.2
3	F	54	165	110.8	103.2	-6.9	97.8	-11.7
4	F	56	165	95.5	83.5	-12.6	71	-25.7
5	F	43	160	100.4	103.5	(+) 3.1	99.6	-0.8
6	F	51	160	77.7	74.3	-4.4	76.4	-1.7
7	F	58	156	109.1	109.2	(+) 0.1	105.2	-3.6
<b>Group 2</b>								
8	F	63	165	94.9	93.7	-1.3	91.7	-3.4
9	M	38	180	102.8	101.6	-1.2	103	0.2
10	F	44	165	122.3	115.5	-5.6	111.6	-8.7
11	F	35	155	86.2	84.8	-1.6	85	-1.4
12	M	55	184	137.4	131	-4.7	-	-

<sup>1</sup>At baseline, <sup>2</sup>After the life style seminars, and before summer, <sup>3</sup>Weight change from baseline to the end of the seminars (step 1) as % of baseline weight, <sup>4</sup>After the self-help groups were terminated, <sup>5</sup>Weight change from baseline to the end of the self help group (step 2)

**Table 3:** Weight change.

None of the participants were critical to the lifestyle seminars but some were to the self-help group. They found the purpose of the self-help group unclear and wanted the leader to be more active in leading the group.

*"The purpose of the group is unclear. Is the purpose of the group to come deeper in our own understanding of the problem or is the purpose to make bonds between the members of the group?"*

*"The leader should be more active in helping the group to follow the routines".*

Some of the participants felt support from the others in the self-help group, while others appreciated having a chance to share their situations with others and to meet regularly.

One woman said:

*"I experience an absolute support from the self-help group to continue to lose weight. They might not directly support my eating habits, lifestyle or physical activity, but they support me and my thoughts".*

Another woman added:

*"It is supportive that there are other people moving on in the same direction as I. And that we meet regularly to... well move on together. It is not more complicated than that, but it is a great difference compared with being alone with a long-lasting work as this".*

The group meetings were also described as motivating as one person said:

*"I feel more motivated to deal with my weight problem when we meet every week and can speak about what has happened during the week, what to do and what not to do".*

Another person expressed:

*"There are no critical eyes or "I-know-it-all-attitudes" expressed in words. I experience an acceptance and affirmation from the group. I feel good from this continuity and regularity and it makes me check my weight every week. And it has been motivating a lot for me".*

Although all participants enjoyed the physical activity parallel with the lifestyle seminars and participated 3 times a week during the lifestyle seminars, not all continued to visit the gym during the following period. According to the participants this was due to lack of

time and lack of support at the gym. The gym may also be too far away and the fee for enrolling in a gym too high.

*"I meant to go to the gym, but it is inconvenient to get there. It is almost 12 miles and it would be easy using the car. I guess it is a question of laziness".*

*"It was easier during the lifestyle seminars because it was free of charge".*

One person found a more unplanned strategy as reason for weight loss:

*"The self-help group has not affected my weight. I have lost a few kilos but that is because I have bought a dog. The dog has helped me to lose weight".*

Some participants had not yet reached their ultimate weight goal, but had started a process which they intended to continue. Others underlined the importance of continuously focusing on healthy living, giving priority to maintain the eating habits introduced during step 1 and reducing stress.

*"I have started to change habits. I'm beginning to see what is wrong with my present meal habits. I have a plan what habits to change for me and my family in order to achieve a good result".*

Yet another said:

*"During stressful periods it is harder to follow the routines. I do think that I could follow a plan for healthy and better eating habits if I prioritize time to do so".*

Most of the participants appreciated that the self-help group meetings and the weight controls were regularly

*"I think it is good to meet every week. The regularity (of meetings) contributes to the feeling of seriousness of the project compared with if the meetings had been more intermittent".*

It is good to monitor weight every week. This makes it easier to keep track of the weight changes and to adjust behavior accordingly.

Another participant said:

*"There is always a little pressure looking forward to the weigh-in every week, even if the others do not know my weight. ... It is good to see the weight in black or white".*

Some participants were positive about the use of the themes, but others were not as the following quotes suggest:

*"It is very good to use themes. Sometimes we have used several themes during the group meeting and other times we have spoken for a longer time about just one theme. The themes made me reflect a lot. I understand what I've done in order to be so obese and why I did it".*

*"Towards the end the themes expired and it became more interesting when we didn't use the themes."*

An experience described in group 2 was that a minimum number of participants were needed in order for the group dynamics to evolve:

*"We were too few in the group to get any dynamics going." "Including five to six persons makes a good group size".*

## Discussion

The aim of this study was to evaluate whether a treatment model consisting of lifestyle seminars and self-help groups could improve and

sustain weight loss. More than half the participants were well-educated, which is not in accordance with other studies [2]. It may have had an impact in positive direction on the result.

The weight loss and the interview with the participants indicate that lifestyle seminars and self-help groups contributed to their weight loss. Ten of 11 persons reduced their initial bodyweight even if some had a very small weight loss. All participants reported emotional reasons for overeating and that has been reported elsewhere [27,28]. However, there was an important difference regarding weight loss between the participants. Those with a weight loss of more than 5 % and sustained the weight loss six months, expressed more awareness and reflecting about the emotional reasons related to their eating behavior. They were able identify the different emotions and reflect about how to deal with them and did not need food to regulate unpleasant feelings. This is probably the most crucial factor for sustained weight loss as emotional awareness is very important for psychic health [29].

Our results indicate that continued weight reduction and sustained weight change are also supported by regular group meetings and overall the participants in this study expressed positive experiences of the self-help group even those who dropped out. Some got support from the other participants in the group and some found discussing food habits and physical activity during the group meetings was motivating. Even the participant who did not lose weight or those who just had a little weight loss said they had become more reflecting, aware of their habits and understood the need to change life style in order to achieve weight loss "there is no other way".

One negative experience of the self-help group was that the purpose was unclear. That underlines the importance of being very clear in the introduction to the self-help group, inform about the aim with such a group, why the leader is passive or leaderless and maybe you even could let people discuss advantages and disadvantages with the model of self-help group before they start.

Offering a self-help group after weight loss may be one way to prevent relapse to former lifestyle habits leading to regaining the lost weight. In the current study three participants dropped out during the lifestyle seminars and five during the self-help groups. The reasons cited for leaving the lifestyle seminars were failure to lose weight and lack of time. The reason for leaving the self-help group was small group size and lack of time. Maybe lifestyle seminars are enough for some people and for others the self-help groups may give an opportunity for reflection about emotional reasons for overeating and thus provide support to sustain weight loss or reach a decision in trying to really change life style. They need more time to take the step towards a change that [15] stated.

Seven of 15 participants completed the entire program. Four of the participants who started the second half of the program achieved a sustained weight loss of more than 5 % after six months. Our result is similar to that reported by [30] where approximately 20 percent of the participants in organized weight loss activities have been found to sustain their weight loss. The highest reported sustained weight losses (45%) have been observed in individuals who achieved sustained weight loss on their own [31]. In our study sustained weight loss was not related to the background variables, sex, age, marital status, education or occupational status. However, overweight is a complex problem and may be related to several individual combinations of causes that also warrants intervention programs. It is important to take into account individual differences among people and accept that people may know best the right way for them to reduce weight. There

is no one way to support overweight individuals to lose weight and there is no "quick fix". To change life-style will take time and a diversity of different interventions are needed.

The rate of bariatric surgery is expanding in Sweden [32]. The cost per person is around SKR 90 000 [33]. The cost for weight reduction via life-style seminars and self-help groups at a healthcare center is not only lower but also less risky for the patient.

Overweight is a very serious problem with secondary negative effects on health and life quality. The results from this small group of participants indicate that such type of community based intervention could enhance weight reduction for some people and promote maintenance of weight loss and we think this is an option for further studies.

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