

Quality of Healthy Weight Loss Workshop Delivery: The Perspective of Healthy Weight Loss Workshop Providers

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Abstract

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BACKGROUND: In Slovenia, we run a preventive healthy weight loss programme for the adult population, which has been running healthy weight loss workshops since 2002. It focuses on the management of risk factors for cardiovascular disease and also includes health education. In the Healthy Weight Loss Programme, participants receive professional support and assistance with weight loss, knowledge and skills to change their diet and exercise habits, and psychological support in the process of losing weight and maintaining a healthy lifestyle.

AIM: The aim of the study is to analyse the perceptions of healthy weight loss workshop providers on the quality of healthy weight loss workshops.

METHODS: A quantitative, descriptive, non-experimental method of empirical research was used. The measurement instrument employed was a questionnaire that was completed by 144 healthy weight loss workshop participants. For statistical analysis we used the binomial test to analyse whether the results matched the defined expectations and the Mann-Whitney U test to analyse the importance of individual factors in motivation for weight maintenance.

RESULTS: Healthy weight loss workshop facilitators found that weight loss and appearance improvement ($\bar{x} = 4.4$), desire for a changed, more beautiful body image ($\bar{x} = 4.3$), concern for well-being ($\bar{x} = 4.2$), concern for health and low self-esteem ($\bar{x} = 4.2$) were the most prevalent reasons for participation among workshop participants. They also note that there is a need for individualised weight loss maintenance plans ($p < 0.001$) and for the inclusion of additional content to motivate weight maintenance in healthy weight loss programmes ($p < 0.001$).

CONCLUSION: Healthy weight loss workshop facilitators support the continuous follow-up of participants, as they are aware that weight management and maintenance after healthy weight loss workshops is about participants adopting a healthy lifestyle, which includes knowledge of nutrition and exercise, a positive attitude towards change and the right kind of motivation.

Introduction

Over the last 20 years, countries in the developed world have seen a marked increase in overnutrition and obesity. Slovenia is not exempt from this, as it faces the same problems. It is well known that the two most important causes of obesity are too much food and physical inactivity. The prevalence or prevalence of obesity is an important risk factor for the development of a number of diseases, including type 2 diabetes and cardiovascular disease.

Obesity is a complex, multifactorial disease defined by excess body weight and poses a health risk. It has been identified as a serious public health challenge worldwide, is a major contributor to disability

and death in the WHO European Region, and increases the risk of chronic non-communicable diseases. Member States have been called upon to halt the rise in obesity within countries and among population groups as a response to the individual and population burden it is causing in the region. Overweight and obesity have reached epidemic proportions in Europe, affecting almost 60% of adults. Children are also affected, with 7.9% of children under 5 years of age and one in three school-age children living with overweight or obesity. The prevalence is temporarily reduced in the 10-19 age group, where one in four are overweight or obese. Worryingly, there has been a consistent increase in the prevalence of overweight and obesity in the WHO European Region, and no Member State is on track to meet the target of

halting the rise in obesity by 2025 [1]. Obesity is an epidemic in urgent need of public health solutions [2], [3]. Efforts to reduce obesity rates focus on a variety of activities at multiple levels, including policy, environment, community and individual [4]. Although a variety of weight management activities are available, participants' success depends on several factors, including completion of a healthy weight loss programme, social support and motivation to change behaviour. It is important to examine motivation at the individual level, as motivation for weight loss and weight maintenance has been shown to be a predictor of successful weight control [5], [6].

The WHO Global Strategy on Diet, Physical Activity and Health, adopted by the World Health Assembly in 2004 and reaffirmed in the 2011 Political Declaration on Non-Communicable Diseases, outlines the actions needed to support healthy diets and regular physical activity. The Strategy calls on all stakeholders to act at global, regional and local levels to improve diets and physical activity patterns at population level. The 2030 Agenda for Sustainable Development recognises NCDs as a major challenge to sustainable development. As part of the Agenda, Heads of State and Government committed to develop ambitious national responses to reduce premature mortality from NCDs by one third by 2030 through prevention and treatment. The Global Action Plan on Physical Activity 2018-2030 provides effective and actionable policy measures to increase physical activity worldwide and aims for "more active people for a healthier world". WHO has published an ACTIVE technical package to help countries plan and deliver their responses. New WHO guidelines on physical activity, sedentary behaviour and sleep in children under five were issued in 2019.

The National Programme on Diet and Physical Activity for Health 2015-2025 in the Republic of Slovenia [7] is guided by a lifelong approach to empower individuals at all stages of life and to create the conditions that will enable them to eat healthily and engage in regular physical activity. The programme aims to improve the dietary and exercise habits of the population from early life to late old age; to halt and reverse the trend of weight gain in the population of the Republic of Slovenia; and to reduce the incidence of chronic diseases and strengthen the sustainability of the health system. It also identifies priority areas for action, such as providing safe and healthy food, with an emphasis on local sustainable supply and self-sufficiency; promoting physical activity for the population at all stages of life; ensuring healthy diets in accordance with guidelines and recommendations for different age groups (especially in the system of organised kindergarten, school and student nutrition, as well as in hospitals and homes for the elderly); and education and research in the field of nutrition and physical activity for health. The strategic objectives of the programme operate in several areas: to increase the proportion of the population eating breakfast every

day by 10%; to increase the proportion of the population eating vegetables at least once a day by 10% and reduce the gender gap; to increase the proportion of the population eating fruit at least once a day by 5% and reduce the gender gap; increase the proportion of the population that is physically active by 10%; reduce the proportion of overfed and obese adults by 5%; reduce the proportion of the population that frequently consumes sugary drinks, sweets and confectionery by 15%; and reduce the salt intake of the population by 15%.

The most important component of an effective weight management programme should be the prevention of unwanted weight gain due to excessive body fat [8]. Maintaining body mass index (BMI) and body fat should be the primary goal of the individual. There is ample evidence that losing excess body fat is difficult for most individuals and that the risk of weight regain is high [9]. From day one of enrolment in a healthy weight loss programme, an understanding of the underlying causes of weight gain should be communicated to each individual, together with a strategy for maintaining a healthy weight as a lifestyle.

In Slovenia, we started implementing the Healthy Weight Loss prevention programme for the adult population as early as 2002. It focuses on the control of risk factors for cardiovascular disease and also includes health education. Healthy weight loss workshops are also an important asset for Slovenia as part of the preventive programme for the adult population, since, as in the rest of the world, the number of overfed and obese people is increasing in Slovenia.

In the Healthy Weight Loss Programme, participants receive professional support and help with weight loss, knowledge and skills to change their eating and exercise habits, and psychological support in the process of losing weight and maintaining a healthy lifestyle. In making lifestyle changes, it is crucial to understand the person who has decided to change in all dimensions of their personality and the circumstances that affect their life.

The workshop starts with an introductory talk before the start and an introduction of the whole professional team involved in the weight loss process. This is followed by a familiarisation session with an initial fitness test, a consultation on the baseline assessment, information on physical activity and healthy eating, changing habits, advice on healthy food preparation, the importance of self-image for mental health and the link with lifestyle changes. This is followed by content on healthy choices and healthy shopping habits, the importance of emotions, rest, sleep and avoiding a sedentary lifestyle. Workshop participants are given psychological support for lifestyle change, motivation for physical activity and healthy eating at work, and individual healthy lifestyle planning. A final meeting is dedicated to reflection and discussion on the attendance of the healthy weight loss

programme, with participants encouraged to maintain their weight in the future. At the end, participants are also invited to follow-up motivation meetings in three, six and twelve months' time.

Workshop participants have 3 individual sessions with a registered nurse, 3 sessions with a registered physiotherapist and a kinesiologist, and 3 sessions with a psychologist. The workshop also includes 3 fitness tests. This programme is followed by a maintenance programme with 3 motivation sessions to be held after 3 months, 6 months and 12 months from the last session. It happens that some individuals do not attend the motivation meetings. The Healthy Weight Loss Programme for Adults in Slovenia has been updated since 2002 and the most recent upgrade of the programme was already carried out in 2018 and should be updated and completed.

Weight loss is an enormous effort for any individual, and maintaining weight loss is an even greater effort [10]. Few prevention programmes in Slovenia are based on recognised theoretical approaches and existing good practices (or effective components). The culture of evaluation of prevention programmes in Slovenia is very underdeveloped, and it is particularly problematic that very few programmes evaluate effects and outcomes in the long term. These are mainly evaluations of the satisfaction and likeability of the programme by the target groups [11].

Managing and maintaining your weight after the healthy weight loss workshops means adopting a healthy lifestyle, which includes knowledge about nutrition and exercise, a positive attitude towards change and the right kind of motivation. Intrinsic motivations such as well-being, better health, increased energy, self-confidence and personal control increase the chances of success in weight maintenance, which in effect means a behaviour change that people adopt and maintain. Knowing the factors for weight loss maintenance from the perspective of the experience of healthy weight loss workshop practitioners helps us to understand which actions and behaviours are key to increasing performance and motivation, and which strategies we need to adopt to make individuals successful.

Methods

The questionnaire was developed for our study based on a review of the national and international literature and research on similar topics [12], [13], [14], [15], [16], [17], [18]. The questionnaire includes demographic data, 13 statements related to factors influencing motivation to participate in healthy weight loss workshops, and 5 statements related to the need to include additional content in healthy weight loss workshop programmes to maintain weight loss more

effectively. Respondents' views were evaluated on a Likert-type rating scale, where 1 means strongly disagree, 2 means disagree, 3 means can't say, 4 means agree and 5 means strongly agree. Inhibiting factors for motivation to maintain weight were rated on a Likert-type scale where 1 is a very important factor, 2 an important factor, 3 a moderately important factor, 4 an unimportant factor and 5 a completely unimportant factor. Data were coded and analysed using Microsoft Office Excel and IBM SPSS Statistics 28.0 software. The reliability of the scale of healthy weight loss workshop providers' views on motivation to participate in workshops is supported by a Cronbach's α of 0.735 for the whole scale and a Cronbach's α of 0.836 for the set of statements on the need to include additional content and activities in healthy weight loss workshops.

The aim of the survey is to analyse the perceptions of healthy weight loss workshop providers on the quality of healthy weight loss workshops.

We formulated the following hypotheses:

- H1: According to the surveyed providers of healthy weight loss workshops, the completion of various questionnaires is a barrier to regular attendance at healthy weight loss workshops.
- H2: According to the healthy weight loss workshop providers surveyed, there is a need for individualised weight loss maintenance plans.
- H3: Most providers of healthy weight loss workshops express the need to include additional content to motivate weight maintenance in healthy weight loss programmes.
- H4: According to the providers of the healthy weight loss workshops, the most important factor that would contribute to maintaining a reduced weight is a multi-year periodic evaluation of weight maintenance.

The sample population consists of participants in healthy weight loss workshops in health education centres in the Republic of Slovenia. We limited ourselves to workshop providers directly involved in the implementation of the workshops. The sample included 144 providers of healthy weight loss workshops.

Table 1: Healthy weight loss workshop providers

	N = 144	%
Gender		
Women's	139	96.5
Men	5	3.5
Age in years		
20 to 30	11	7.6
31 to 40	41	28.5
41 to 50	72	50.0
51 to 60	18	12.5
61 or more	2	1.4
Education		
DMS / graduating healthcare professional	93	64.5
DMS / graduating healthcare professional with a Master's degree	41	28.5
Professor of Health Education	4	2.8
No answer	6	4.2

Table 1 shows that 144 workshop practitioner respondents took part in the survey, of which 139 were women (96.5%) and 5 were men (3.5%). The largest

proportion of respondents belonged to the 41-50 age group (72; 50%), followed by the 31-40 age group (41; 28.5%), then the 51-60 age group (18; 12.5%) and the 20-30 age group (11; 7.6%). The 61+ group was represented by two respondents (1.4%). 93 respondents (64.5%) had a university degree, 41 (28.5%) had a master's degree, 4 (2.8%) had a bachelor's degree (professors of health education), and 6 (4.2%) did not wish to specify. 93 respondents (64.5%) had a professional degree, 41 (28.5%) had a master's degree, 4 (2.8%) had a university degree (professors of health education), and 6 (4.2%) did not wish to specify.

Results

We were interested in the factors that healthy weight loss workshop providers consider to be the most influential on participants' motivation to participate in healthy weight loss workshops. We used a five-point Likert scale of attitudes: 1 - strongly disagree, 2 - disagree, 3 - can't say, 4 - agree, 5 - strongly agree.

Table 2: Providers' perceptions of factors influencing individuals' motivation to participate in healthy weight loss workshops

Claims	min	max	PV	SO
Personal doctors or family medicine clinics are key to engaging participants in healthy weight loss workshops and maintaining a reduced weight.	1	5	4.0	1.0
A small number of participants join the healthy weight loss workshops on their own request.	1	5	3.4	1.1
Doctors' advice, more than that of nurses, encourages participants in a healthy weight loss workshop to maintain a reduced weight.	1	5	3.6	1.1
Personal hygiene problems are motivating factors for maintaining a reduced weight in participants of a healthy weight loss workshop.	1	5	3.5	0.9
Difficulties in clothing choice are motivating factors for maintaining a reduced weight in participants of a healthy weight loss workshop.	1	5	3.8	0.9
Low self-esteem of participants in a healthy weight loss workshop is an intrinsic motivating factor for maintaining a reduced weight.	1	5	4.1	0.8
The desire for a changed, more beautiful body image is an extrinsic motivating factor for maintaining a reduced weight in participants of a healthy weight loss workshop.	1	5	4.3	0.7
Health concerns are an intrinsic motive for participants to maintain their weight.	2	5	4.2	0.8
Concern for well-being is an intrinsic motive for participants to maintain their weight.	2	5	4.2	0.7
Weight loss and improvement in appearance are common extrinsic motivators to start controlling eating, to start exercising and to maintain a reduced weight.	2	5	4.4	0.6
Administrative activities and the completion of various questionnaires are barriers to regular attendance at healthy weight loss workshops.	1	5	3.9	1.1
Forgotten glasses, shaking hands, poor understanding of what is written, etc. affect attendance at healthy weight loss workshops.	1	5	3.9	1.1
Participants in the Healthy Weight Loss Workshop feel reluctant to fill in the paperwork.	1	5	3.9	1.1

Table 2 shows that the practitioners gave the highest mean scores to the following factors: weight loss and appearance improvement ($\bar{x} = 4.4$), desire for a changed, more beautiful body image ($\bar{x} = 4.3$), concern for well-being ($\bar{x} = 4.2$), concern for health and low self-esteem ($\bar{x} = 4.2$). However, they also consider that personal doctors or family medicine clinics play a key role in engaging participants in healthy weight loss workshops and maintaining a reduced weight ($\bar{x} = 4.0$). Workshop providers also consider that difficulties in choosing clothes are also a more important factor in

motivating participants to attend healthy weight loss workshops ($\bar{x} = 3.8$). They also find that administrative activities and filling in various questionnaires are barriers to regular attendance at healthy weight loss workshops and feel reluctance to fill in the paperwork, as are forgetting glasses, shaking hands, poor understanding of what is written down, etc. ($\bar{x} = 3.9$).

We also looked at how healthy weight loss workshop providers felt about participants completing different questionnaires or if this was a barrier to regular attendance.

Table 3: Administrative activities are a barrier to regular attendance at healthy weight loss workshops

Answer	n=144	%
I strongly disagree	7	4.9
I disagree	16	11.1
I can't define	11	7.6
I agree	63	43.8
I strongly agree	47	32.6

The results in Table 3 show that 110 (76.4%) workshop providers agreed or strongly agreed with the statement that administrative activities are a barrier to regular attendance.

As we were interested in whether completing different questionnaires is a barrier to regular attendance at healthy weight loss workshops, we performed a binomial test (Table 4), which showed that the results did not deviate from the expected results ($p=0.680$). This means that completing different questionnaires is a barrier to regular attendance at healthy weight loss workshops. Hypothesis 1 is confirmed.

Table 4: Binomial test on administrative barriers

Binomial test					
Group	Category	N	Observed shares	Test share	P
Group 1	Obstacle	110	0.763889	0.750	0.680
Group 2	Without	34	0.236111		
Total		144	1.000000		

We also looked at the extent to which providers of healthy weight loss workshops agree that there is a need for individualised weight loss maintenance plans. The results in Table 5 show that 139 (96.5%) of the healthy weight loss workshop providers agreed or strongly agreed with this statement.

Table 5: Need for individualised weight loss maintenance plans

Answer	n=144	%
I strongly disagree	0	0.0
I disagree	1	0.7
I can't define	4	2.8
I agree	50	34.7
I strongly agree	89	61.8

A binomial test was performed (Table 6), which showed a statistically significant positive deviation of the results from expectations ($p<0.001$), indicating that the respondents of the healthy weight loss workshops believe that there is a need for individualised weight loss maintenance plans. Hypothesis 2 is confirmed.

Table 6: Binomial test on the need for individualised weight loss maintenance plans

Binomial test				
Category	N	Observed shares	Test share	P
Group 1 There is a need	139	0.965278	0.750	<0.001
Group 2 No need	5	0.034722		
Total	144	1.000000		

The results in Table 7 show that 124 (86.1%) of the healthy weight loss workshop providers agreed or strongly agreed that there is a need to include additional content to motivate weight maintenance in healthy weight loss programmes.

Table 7: Need for the inclusion of additional content to motivate weight maintenance in healthy weight loss programmes

Answer	n=144	%
I strongly disagree	3	2.1
I disagree	3	2.1
I can't define	14	9.7
I agree	53	36.8
I strongly agree	71	49.3

A binomial test was performed (Table 8), which showed a statistically significant positive deviation of the results from expectations ($p < 0.001$), indicating that the majority of providers express the need to include additional content to motivate weight maintenance in healthy weight loss programmes. Hypothesis 3 is confirmed.

Table 8: Binomial test on the need to include additional content to motivate weight maintenance in healthy weight loss programmes

Binomial test				
Category	N	Observed shares	Test share	P
Group 1 There is a need	124	0.861111	0.750	<0.001
Group 2 No need	20	0.138889		
Total	144	1.000000		

We also wanted to know what activities the participants of the healthy weight loss workshops think contribute to maintaining a reduced weight.

Table 9: Activities that contribute to maintaining a reduced weight

Activities to maintain a reduced weight	PV (SO)	M (MR)	p*
Including examples of good practice by showcasing people who have been maintaining their weight loss for years, videos, films, etc.	4.4 (0.7)	4.0 (4.0-5.0)	0.115
Videos and films on motivation for long-term weight maintenance.	4.3 (0.9)	4.0 (4.0-5.0)	0.110
Motivational interviews before and after the workshops.	4.5 (0.6)	5.0 (4.0-5.0)	0.928
Designing individualised plans to maintain weight loss over a longer lifetime.	4.6 (0.6)	5.0 (4.0-5.0)	0.296
Multi-year continuity of supervision of participants by health professionals.	4.5 (0.7)	5.0 (4.0-5.0)	0.355

In terms of median and mean, practitioners expressed the most important factor as "Designing individualised plans to maintain weight loss over a longer lifetime." (The median for this factor was 5, which means that more than half of the practitioners expressed maximum importance. The factor did not prove to be statistically significantly more important than the other activity factors for maintaining a reduced body weight ($p = 0.296$). Factor "Participants receive more years of follow-up from health professionals." (\bar{x}

= 4.5)" did not prove to be statistically significantly more important than the other activity factors for maintaining a reduced weight ($p = 0.355$). The hypothesis "According to the educators, the most important factor that would contribute to maintaining a reduced weight is a multi-year periodic evaluation of weight maintenance". We reject.

Discussion

As Montesi, El Ghoch, Brodosi, Calugi, Marchesini, and Dalle Grave (2016, p. 38) state, physicians play a major role in involving patients in the coordination and supervision of teams in the management of obesity-related complications. As GPs often have known their patients for many years, they are considered to be very suitable advisors for exercise and health, especially for the elderly, according to several authors [19], [20], [21]. In line with the above, GPs can motivate health-promoting behaviours through their good and continuous knowledge of their patients. They have a holistic view to understand their patients and are therefore able to identify their needs and requirements. GPs are usually well connected with patients in their locality, often not only having the opportunity to voice their recommendations and referrals, but also being able to prescribe specific exercise measures, e.g. functional exercise, the so-called "Exercise Prescription", which should also serve the purpose of patient awareness [22]. International studies have shown that many GPs exercise and advocate their advisory function in the field of prevention and health promotion [23], [24], [25].

There is also research that referral by a primary care physician to a community-based weight loss programme results in greater weight loss than self-managed efforts, and that this is a cost-effective use of public funds [26]. However, there are important individual differences in outcome. Understanding the factors associated with long-term success can help guide decisions about the continued provision of weight loss support, facilitating more cost-effective treatment. According to [27], adherence to weight loss interventions and sustained motivation to lose weight are important for weight management. According to [28], there is a large body of scientific evidence that lifestyle interventions for obesity are rarely implemented in primary care. They analysed the motivation for weight loss in patients with obesity and the resources used by primary care centres to promote behavioural change and the limiting factors self-reported by patients when trying to lose weight. Serrano-Fuentes, Rogers and Portillo [29] argue that different types of health professionals, especially general practitioners, have a negative influence on the decision to attend healthy weight loss workshops. Although the interviewees had less contact with them, they were mainly rated as unhelpful. Ten participants identified them as negative influences on obesity

management as they increase stigma, do not explore each case in depth or do not provide the right tools to improve physical activity levels or diet. For example, Participant 1 pointed out that health professionals were patronising and did not provide person-centred individualised plans over time. The prevalence of obesity is on the increase worldwide and yet scientific evidence shows that primary care professionals are not adequately addressing overweight and obesity [30].

One of the most important barriers for participants to engage and attend healthy weight loss workshops regularly was the difficulty for workshop providers to complete the documentation required to record attendance. All the documents to be filled in by the participants are prescribed by the National Public Health Office of the Republic of Slovenia. For some elderly people there is a significant obstacle in filling in the forms as they have poor eyesight and often forget their glasses. Others do not follow the instructions for filling in the questionnaires because they cannot hear well, some have shaky hands, are embarrassed in front of other, younger participants, etc. These are obstacles that are a problem for them, and it happens that individuals do not return to the workshop, or only occasionally, because of these very reasons. Also [31] state that there is considerable heterogeneity among people who have been involved in obesity treatment programmes.

Short weight loss programmes are known to be unsuccessful in the long term, with only 10% to 20% successfully maintaining weight after 5 years, and regaining the original weight [32]. Failure to take into account the complexity of causal factors and too short a time for maintenance and support for change leads to high relapse rates, and it is imperative that the initial programme is followed by a maintenance programme or follow-up of the participants for as long as possible [33]. In fact, previous failed attempts at sustained weight loss have contributed to the perception of individuals that weight loss is hopeless [34].

A study on the outcomes of a healthy weight loss programme was carried out at Lusófona University in Lisbon, Portugal, and found that changes in body image and well-being were associated with changes in body weight during treatment and after weight monitoring. The study involved 142 overweight and obese women (BMI = 30.2 +/- 3.7 kg/m²; age = 38.3 +/- 5.8 years). The healthy weight loss programme was conducted over a period of four months and twelve months of follow-up of the programme participants. The authors of the study [35] state that psychosocial variables improved during the four-month treatment and were associated with weight reduction.

Conclusion

The rising incidence of obesity in Slovenia shows the urgent need to continue activities to raise

awareness among individuals and groups, both at local and national level, about the importance of individual responsibility for one's own health. In order to improve and manage one's own health, an individual needs a certain motivation, which is also necessary to maintain a healthy weight. Preventive health activity is certainly of key importance in this respect.

Health education workshops for healthy weight loss are provided in health promotion centres, but their effectiveness is questionable, as individuals regain the weight they have already lost after completing the education and gaining the knowledge. There is a major problem of weight maintenance, not only during the programme but also afterwards, when participants no longer have the supportive environment of the group and lose motivation to maintain their weight. The results of the survey showed a strong desire among the interviewed healthy weight loss workshop providers for continuous follow-up of the participants, as they are aware that weight management and maintenance of the participants after the completion of the healthy weight loss workshops is about adopting a healthy lifestyle, which includes knowledge of nutrition and exercise, a positive attitude towards change and the right kind of motivation. The question arises as to what actions and behaviours are key to increasing performance and motivation for weight maintenance and what strategies need to be adopted for individuals to be successful.

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