

Barriers and facilitators of weight management in overweight and obese people: Qualitative findings of TABASSOM project

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ABSTRACT

Introduction: Since weight management is affected by various factors, including social and behavioral ones, this study aimed to explore the peoples' experience of barriers and facilitators of weight management.

Materials and Methods: This qualitative content analysis was conducted as the initial step of TABASSOM Study. Participants, who tried to reduce their weight at least once, were selected by purposeful sampling method from aerobic fitness clubs, parks, and public offices in Isfahan in 2010. Data saturation was reached after indepth unstructured interviews with 11 participants. Data analysis was done by conventional content analysis method.

Findings: The participants have intermittently followed weight loss program. Barriers such as physical problems, lack of motivation, lack of work and family support and lack of time have resulted in their failures and outages. The main facilitator to start or restart after stopping such programs for a while was positive psychologic effect.

Discussion and Conclusion: Findings showed that many problems could prevent weight loss. It is important to identify obstacles that hinder weight management and regimen programs and to discuss them with people before planning for their weight management.

Key words: Obesity, overweight, qualitative study

INTRODUCTION

Chronic noncommunicable diseases (NCD) are considered as the main cause of death and disability.^[1] The growing epidemic of NCD is related to recent lifestyle changes that increase the prevalence of its risk factors.^[2] Obesity is one of major

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risk factors of NCD. Various studies have shown the effect of weight gain on high blood pressure, diabetes, cardiovascular disease, and some cancers.^[3] The increasing prevalence of obesity reflects changes in the society, such as sedentary lifestyle, more consumption of junk food, mood disorders, eating disorder, genetic factors, as well as the effect of environmental changes.^[4,5] Health care system has focused on obesity and overweight for many reasons. First, its prevalence has recently been increased to such an extent that the World Health Organization (WHO) has declared it as an epidemic.^[6] More than 60% of adults are classified as obese and overweight in the United States.^[7] Obesity has nearly doubled during 1960-1994 (from 12.8% to 22.5%).^[8] The prevalence of overweight and obesity has been reported to be —42.8% for men and 57% for women in Iran.^[9] The second reason for attention to obesity is its related consequences and mortality rate. For example, according to one analysis, in a typical insurance pool of one million persons of 35–84 years of age, obesity account for 132,900 cases of hypertension, 58,500 cases of type 2 diabetes, 51,500 cases of hypercholesterolemia, and 16,500 cases of coronary heart disease.^[10] The third reason is the huge costs due to associated disorders and illnesses resulting from this problem. Direct medical costs from obesity consume 5.7%, or an estimated \$93 billion of total US health expenditures.^[11]

Given the above facts, prevention and treatment of overweight and obesity are one of the health priorities all over the world.^[12] Furthermore, overweight and obesity are major preventable and modifiable risk factor for NCD. However, despite efforts to reduce the percentage of overweight and obese persons, experts do not expect to see a significant reduction during the next decade.^[4]

Extensive research was conducted on obesity but their findings have been contradictory, and there is no single effective approach in maintaining long-term weight control.^[13] It is important to work with obese people from where they are, and it is important to know how they feel and want and how they are interacting in different scenarios to set achievable and realistic goals.^[14, 15]

Since many factors including behavioral and social factors affect weight management; and qualitative research is useful in gaining insights about the people's attitudes and perceptions and identifying social and behavioral factors related to weight management,^[4] this study aimed to explore the peoples' experience in the field of barriers and facilitators of weight gain and it's management in Isfahan. This is a preliminary phase of the research project "Evaluation of changes in knowledge, attitude, and practice of normal weight, overweight, and obese people after encouragement and educational interventions in Isfahan" entitled "TABASSOM" study. It is hoped that this study will help to identify peoples' experience, beliefs, and attitudes, in order to develop the questionnaires that will be used in TABASSOM project, to develop weight management and prevention interventions in the community and to provide a guide and basis for further discussions and research on this field.

MATERIALS AND METHODS

Conventional qualitative content analysis was used to guide the project of inquiry. Volunteered persons, who were unsatisfied with their current weight and tried to reduce their weight at least once, were recruited by purposeful sampling from aerobic fitness clubs, parks, and public offices in 2010. Exclusion criteria were inability to express their experiences for any reason, such as lack of interest, dialect or language differences, limitations, and inability to speak (stress, embarrassment, and so on).

Sample size in qualitative studies depend on required information,^[16] researcher's time, and participants' availability.^[17] Sample size is often low^[18] to allow the researcher to investigate a wide range of experience.^[19] Data saturation was achieved after indepth unstructured one-on-one interviews with 11 participants (6 women, 5

men). Two last participants gave no more information. Interviews lasted 40 min on average.

Researchers obtained a letter of introduction from Isfahan Cardiovascular Research Center (a WHO collaborating center), and referred to the participants based on study goals and inclusion criteria. They introduced themselves and study goals, received verbal informed consent, and selected a suitable place for the interview (which was quiet, calm, and proper to maintain participants' privacy). The participants were assured that their story will be confidential and they are free to quit at any time. All interviews were audio-recorded. The permission was obtained for calling for further information or clarification. Open questions were asked during the interview to allow them to describe freely their experiences.

Then data analysis was done using qualitative content analysis method. For this purpose, all the participants' descriptions and stories were read to achieve a general understanding. Then the text was reviewed for open coding. In this step, notes and headings were written in the texts while reading, and as many headings as necessary were written down in the margins to describe all aspects of the content. Then, categories were grouped. One heading encompassing all codes was considered for each category. Finally, the groups and classes as possible were placed in larger classes. The purpose of creating larger classes was to achieve new knowledge and understanding and full description of the content.^[20]

Researchers used prolonged engagement (for data collection and data analysis), peer debriefing (all colleagues discussed data analysis process), member checks (vague statements adjusted by calling the participant, extracted concepts were returned to the participants and examined) for enhancing credibility. Inquiry audit by an independent qualitative researcher was considered for enhancing dependability and confirmability. Researchers tried to select different participants from different cultural and economic groups and describe study design for enhancing transferability.

FINDINGS

Although entrance criteria were weight dissatisfaction (whether they were overweight or obese or not) however, all participants were overweight or obese. Their definitions for overweight and obesity and the causes were varied. Furthermore, their acknowledging overweight and tendency to reduce weight were not according to health professionals' recommendations, but they were based on the information that they have acquired in their life.

Participants were 34–56 years of age, and eight of them were employed. Their education ranged from diploma to PhD. All the participants had a BMI above 29.8 kg/m² (their weight and height were calculated according to the individual report). All participants took measures to lose weight because of their dissatisfaction of overweight and obesity. Nevertheless, most actions were done based on their knowledge. It was not recommended or supervised by any health professionals. Only two participants (and only once) were referred to the nutritionists. However, their efforts have not been continuous and often interrupted for a long time without any action.

Participants noted some results of their efforts that were effective in stopping, continuing or repeating the weight loss program after a period of stagnation or cessation. These are summarized in table I.

In general, participants have stopped their selected weight management program due to physical problems, lack of motivation, lack of work and family support, and finally, lack of time. After a while, they resumed previous or new measures again due to weight dissatisfaction and some positive effects of previous actions.

Physical problems were obesity-related fatigue during exercise, feeling weak, feeling nervous and grumpy due to reduced food intake, feeling the loss of brain function due to reduced food intake, digestive problems, and joint-pain experienced after exercise, and skin atrophy and shrinkage.

One interviewee, a 42-year-old man, said:

“One reason is that I am getting tired, because the weight is causing excessive pressure to the body, then I soon stop exercising.”

As one surgeon articulated it:

“Well, when you are on diet, you have some problems, you will be nervous, your brain is less efficient, and you are usually nervous, you will be bad-tempered and have bad behavior. This problem is due to diet. Thus, shortly after the diet, I have to stop it.”

It is notable that he was a surgeon and normally supposed to have comprehensive information about overweight, obesity, its side effects and management. He continued that surgery is a highly intellectual work which requires high concentration, but being on a diet will reduce his focus and efficiency. Even this participant did not change his diet under the dietitian supervision, and more exploring of his diet revealed that his program for losing weight has been very severe, with many dietary restrictions.

Another participant, a 36-year-old employed woman, pointed to her experience of participating in exercise classes, and said:

“Well, I went to a sport club. That exercise made physical problem for me, the sport was incorrect even it was formal class. My knee pain was so severe, it damaged my right knee, and it was due to wrong sports that we did, the wrong steps and running.”

Some participants mentioned lack of motivation as a reason for stopping the program of their choice. Sometimes this lack of motivation was internal and

Table 1: Barriers and facilitators of weight management in overweight and obese people

Barriers of weight management	Physical problems	Obesity-related fatigue during exercise, feeling weak, feeling nervous and grumpy due to reduced food intake, feeling the loss of brain function due to reduced food intake, digestive problems, joint pain experienced after exercise, and atrophy and shrinkage of the skin
	Lack of motivation	Lack of motivation, strong perseverance, and a lack of priorities for weight loss
	Lack of work and family support	Lack of motivation due to peers' failure Lack of family support: Due to the lack of emphasis on physical activity and eating healthy food
Facilitators of weight management	Lack of time Positive psychologic effects	Impossibility of mobility and adherence to prescribed regimens in the workplace Physical satisfaction and a sense of joy and happiness, Increased confidence even with a little weight loss

related to the person. For example, a woman said:

“A person must really want. We saw people who wanted to lose weight but they were not motivated. They thought that just coming to the sport club and saying we want to lose weight is enough. They are not motivated to use their time in the club and do exercise. They just want to fill their free time.”

However, sometimes lack of motivation was due to peers' negative effects or failure. In this regard, one male participant said:

“Sometimes I do something, some exercise in my life, but unfortunately, it is episodic, not continuous. I saw people who used some recommended regimen, after a while they experienced a series of problems, including a series of other diseases, and after a short time they went back to their first weight.”

Another participant mentioned that medical advices in the workplace are impracticable, and said:

“Dietitian prescribed a diet for me, but we cannot do it at work. Because, well, we wake up at six in the morning, go out about 6:30 am, get back home at 3 pm. I have to eat every food that is served in my office. For example, according to dietitian advice I should eat fruits at 10 am, vegetables with a meal, or just a series of other advice that I really cannot follow it in workplace. Therefore, I actually cannot. It is not practical.”

One interviewee, a 36-year-old woman, said about lack of workplace support:

“When you have not any possibility, when you have not good conditions, you cannot. When your administrative time is too much, or you must sit for long time due to the type of your work, you cannot. They did not offer you any opportunity. Moreover, I know that sitting too much, standing too much result in localized obesity.”

Another participant said:

“Environmental factors, well, are very effective, especially in the workplace and living environment. Sedentary life in workplace is very effective.”

A male interviewee also expressed that they need constant supervision and monitoring. He stated that workplaces should be monitored and provides feedback. He said:

“Office, or everywhere staffs are working i, they never come to devote a little capital to check personnel's health, set at least once a year orientation classes, or a series of

medical tests for them, and prevent over weighting... instead a series of subsequent diseases will appear. After that, health agencies, or ministry, or insurance or workshop or other people must spend a lot of money to treat these diseases.”

A male participant told about lack of family support: “Environment ..., when you come home, you stay with no mobility; you do not anything, i.e. there is no mobility, it is sedentary life. You sit in front of TV, and only waste your time in this way. Well, your family does not insist on doing a series of activities. They do not even insist for going out, walking, or a series of other activities. If the family insists, it is effective.”

Lack of time was other barrier that was often mentioned. Some facilitators were effective in starting or restarting weight loss programs. Participants noted that they restart the program after discontinuation of their selective program for losing weight. They mentioned reasons, such as emotional positive effects of previous measures taken to reduce weight. One interviewee said:

“I often lose 1 kg for a short period, I actually feel lighter. It is very effective on my activities. I know that I will double my activities if I will become leaner than my weight is now. Then, I try to reduce again that amount.”

Another one stated:

“You know... Losing weight with physical exercise brings you a kind of emotional and physical satisfaction. Because it is true and I was satisfied. At that time, I thought that I chose right way. I felt my soul and body were satisfied with exercise. That also means that I was happy in doing my job, household duties, or anything that was physical or mental work.”

DISCUSSION

None of the participants in the current study remembered that a health professional pointed out that they are overweight or obese. They themselves have paid attention to it. Brown *et al* in a qualitative study showed that sometimes health professionals had pointed out that “clients' weight” was a “problem.” It means that they raised awareness but there was no followup and consultation.^[21] Therefore, we raised these questions “why do none of the health professionals remind participants about their weight gain when they have met them for other medical problems?” and “why there is no evaluation of clients who are referred to the health-care system with a major risk factor like obesity?”. Despite the medical consequences of obesity, only 42% of adults

recall getting nutrition advice from a health professional. Several reasons may lead to this problem.^[22] It is recommended that further studies address these reasons.

All participants in our study believed themselves to be over weight and had a tendency to lose weight. Gabrielsson's qualitative study has reported similar findings.^[23] Brown *et al* in their study showed that almost all participants had personal responsibility about their size.^[21] However, beside this own responsibility, our participants wanted workplace or community to take some useful strategies.

As mentioned earlier, physical problems were the main barrier for ending weight loss program. Other studies have also indicated that obesity is usually associated

with musculoskeletal pain resulting in functional motor limitations.^[24] Jensen and Hsiao also stated that motor and functional limitations are associated with obesity in the elderly.^[25] A meta-analysis has also shown people with overweight and obesity have more chronic low back pain than others.^[26] Pain or chronic fatigue can affect wellbeing, quality of life, and functional capacity leading to decreased physical activity and lack of motivation to follow healthy diets. The significant pain can promote immobility leading to loss of muscle mass, reduced cardiopulmonary fitness, and precipitated psychological and metabolic changes that cause further weight gain. Therefore, pain management may be the first important step to promote mobility and active lifestyle.^[14] However, our finding showed the 2 important points. First, the relationship between pain and obesity that was mentioned earlier. Second, some participants pointed to the incorrect exercise. This finding suggests that it is important to organize special centers or to introduce accredited centers and check their work.

Other barrier to sustained weight loss program was lack of motivation. However, what should be carefully considered by the health care system is that sometimes lack of motivation was due to negative experiences of peers. This consideration is essential since negative experiences of people who have tried to lose weight may reduce or even eliminate others' motivation to take part in these programs. This can lead to the failure of all investments and measures for weight management programs. Almost no participants have sought health professional help to reduce their weight. Our participants stated that their recommendations were not useful or practical, or sometimes lead to complications among their friends. Health professionals should not ignore this mistrust. It needs wide attention.

It is necessary to assess the patient's motivation before beginning weight loss therapy.^[4] Patients must be ready to make weight reduction efforts in order to succeed. Health professionals should include clients' motivation in their assessment process if they want to help them to be successful in weight loss. Lifestyle changes required not only necessary modifications in patient's daily life but also necessary social support for sustained healthy behaviors.^[4] Kremers *et al* showed that worksites provide many opportunities to reinforce the adoption and maintenance of healthy lifestyle behaviors and to reach large numbers of individuals of various socioeconomic levels and ethnic backgrounds.^[27]

A study conducted by Mauro *et al*^[24] showed that lack of time was one of the most commonly reported barriers. It is difficult for a person to find extra time to engage in physical activity or to plan a healthy diet.^[24] Although the results of Paul-Ebhohimhen's review^[28] indicated that group interventions are more effective than individual interventions, Mauro *et al* stated that it is necessary to choose obesity management strategies based on individual's schedule if they are expected to follow them in the long term.^[24]

The results of our study showed that even a small amount of success in weight loss program could lead to program continuation or its repetition. Initial success in weight loss and subsequent care is associated with long-term success and can prevent frustration, demoralization, and perceived failure of the health care professional and the patient.^[4] Another study showed that participants who increased their frequency of self-weighing over 6-months period had significantly better weight loss than those who maintained or decreased their frequency of self-weighing.^[29] It seems that it is an appropriate policy to encourage people to daily self-weigh. This strategy may be useful for successful weight loss.

Thus, it can be said that many problems can prevent weight loss. Identifying these causes is essential for a successful weight treatment. Failure to identify and address barriers of weight management, and subsequent clients' failure in weight management can lead to frustration, low self-esteem, and low self-efficacy. On the other hand, identifying these obstacles and exploring client's experience in weight management and its results can lead to better results. It is important to know that not all individuals face the same obstacles. It seems that it is essential to have unique counseling and planning for each individual.

One of the strengths of this study was sampling a diverse

range of experiences, educational and social backgrounds of participants. However, the nature of qualitative studies, especially the low number of samples, prevents generalization. It is hoped that our findings increase our insights, and assist in full understanding of obese or overweight individuals need, perceptions and experiences, and finally can help to conduct successful weight management programs in the community.

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