

Original Article

Qualitative study on the key elements of obesity counseling in Korean Medicine

Sungha Kim, KMD, Ph.D.^{1#}, Seung Eun Chung, RN, Ph.D.^{2#}, Kyungsun Han, KMD, Ph.D.³
Sunmi Choi, KMD, Ph.D.^{4,5}, Jun-Hwan Lee KMD, Ph.D.^{1,5*}

¹KM Science Research Division, Korea Institute of Oriental Medicine, Daejeon, South Korea

²Department of Nursing, Korea National University of Transportation, Jeungpyeong-gun, South Korea

³Department of Rehabilitation Medicine of Korean Medicine, Dongguk University Ilsan Korean Medicine Hospital

⁴KM Data Division, Korea Institute of Oriental Medicine, Daejeon, South Korea

⁵Korean Convergence Medical Science, KIOM School, University of Science & Technology (UST), Daejeon, South Korea

Objectives: Weight counseling is an inevitable process for patients with obesity who intend to lose weight; however, the contents of real-world counseling practices remain uncertain in Korean medicine (KM) practice. This study aimed to explore the structure and constituents of obesity counseling in KM.

Methods: Qualitative methods were used to explore the structure of weight counseling and clinicians' approaches to weight counseling, particularly the advice and main constituents of weight counseling in KM. Nine KM clinicians (4 women, 5 men) from nine clinics completed face-to-face, individual and semi-structured interviews from September 2019 to February 2020 in Seoul, Daejeon, Cheonan, Seongnam, Asan, and Hwaseong. The interviews were digitally recorded, transcribed verbatim, and categorized based on their constituents.

Results: During weight loss counseling, the six principal constituents of KM identified were: planning with patients, motivation, correcting misinformation on weight loss, dietary and exercise advice, medication guidance, and customized guides for each type.

Conclusion: Clinicians with in-depth knowledge about obesity prescribed personalized guidance for exercise, diet, and medication through an integrative approach. The study results provide an in-depth understanding of weight counseling in KM. These six constituents could guide the counseling provided by clinicians in obesity care.

Key Words : clinician counseling, Korean medicine, obesity, qualitative research, weight counseling

Introduction

Obesity prevalence has increased worldwide in the past 50 years, with over one-third of the world's population now classified as obese^{1,2}. The number of people with a body mass index (BMI) of >30 kg/m² is expected to increase from 3.5% in 2005 to 9.0% in 2030 in South Korea³. The

socioeconomic loss due to obesity amounted to 7.5 billion USD in 2015, which has doubled in the last 10 years in South Korea³.

The first-line treatment for obesity includes lifestyle interventions such as diet, physical activity, and behavior therapy. Medication and bariatric surgery are considered secondary therapeutic options⁴. To date, obesity treatment

• Received : 2 January 2023 • Accepted : 20 April 2023

• #Two authors are equally attributed. Correspondence to : Jun-Hwan Lee

KM Science Research Division, Korea Institute of Oriental Medicine, Daejeon 34054, South Korea (J-H. Lee).

E-mail: omdjun@kiom.re.kr (J-H. Lee).

strategies have been unsuccessful in the long term²⁾. Only approximately 15% of patients with obesity experience weight loss; however, one-third return to their initial weight, while most fail after 5 years⁵⁾. However, sustainable weight loss may be achieved with adequate clinician guidance through counseling. Hence, obesity requires comprehensive and multicomponent approaches, including lifestyle or behavioral training, dietary changes to reduce energy intake, and an increase in physical activity.

Counseling includes comprehensive education, lifestyle advice, and psychological support⁶⁾. It is a major way to stabilize patients' psychological urges to overeat, correct their weight loss knowledge, and eventually balance their energy input and output. Several guidelines have been developed to assist clinicians in promoting effective counseling^{7,8)}. These guidelines cover various fields ranging from counseling purposes to behavioral strategies. Clinicians use these guidelines to outline obesity counseling strategies⁶⁾.

Previous studies have used qualitative methods to explore clinicians' approaches to weight management counseling, including the advice provided during routine consultation⁹⁻¹⁴⁾. However, previous studies' interviewees have been limited to primary clinicians or general practitioners working in community health centers. They focused on how doctors raise obesity issues among patients who present to their clinics for other medical reasons. Thus, counseling for weight loss is easily overlooked, and doctors tend to be negatively disposed to it^{10-12,14)}.

In South Korea, there are many specialized

obesity Korean Medicine (KM) clinics that mainly focus on obesity management. The number of such clinics has rapidly increased, with more than 3,000 clinics in Seoul, the capital of South Korea, alone^{15,16)}. This popularity is due to the success of clinicians meeting the needs of patients who want personalized weight loss treatment specific to their physical state while minimizing adverse effects¹⁷⁾. In addition, a manual for standard counseling of patients with obesity in KM was developed by recognizing counseling as an important factor in obesity management⁸⁾. Patients with obesity go to specialized obesity KM clinics to manage their weight and not for other issues. Therefore, counseling should focus on advice for weight management rather than how a weight issue is brought up. However, there is currently no data on weight loss counseling practices in KM. Therefore, this study aimed to explore the structure and constituents of obesity counseling in KM using qualitative methods, which can describe the complexities of weight counseling, which typically cannot be captured through closed-ended surveys.

Methods

1. Study design

This prospective, qualitative study was conducted at KM clinics in Seoul, Daejeon, Cheonan, Seongnam, Asan, and Hwaseoung. This research was conducted in accordance with the Declaration of Helsinki. reviewed and approved by the Human Research Ethics Committee of the Korea Institute of Oriental Medicine (I-1908/006-001, 5 September 2019) for studies involving humans.

Informed consent was obtained from all subjects involved in the study. Written informed consent has been obtained from the participants to publish this paper.

2. Study sample and recruitment

Nine clinicians were recruited from the Society of Korean Medicine for Obesity Research (<https://obesity.or.kr/>) to participate in face-to-face, individual, and semi-structured interviews. The SKMOR has more than 500 KM clinicians who have worked in specialized obesity clinics. Eligible clinicians were recruited by email using purposive¹⁸⁾ and snowball sampling¹⁹⁾. The clinicians completed a 4- or 6-year course in a nationally accredited KM university, had a KM doctor license certified by the Ministry of Health and Welfare in South Korea, and had more than 1 year of experience in medical management for weight loss.

3. Interviews and measure

The selected clinicians participated in face-to-face, individual, and semi-structured interviews. The interviews were digitally recorded and lasted for less than 1 h. The interview guide was developed by two of the authors who had worked as clinicians in specialized obesity KM clinics and were experts in qualitative methods. The interviews involved asking clinicians to describe their weight loss counseling experiences; the objectives and roles of counseling in obesity management; their advice for weight loss during counseling; what they say to their patients about their weight; the difference between KM clinicians and other experts, such as dietitians or personal trainers;

counseling on obesity; and the customized strategies provided to patients during counseling. The clinicians also provided demographic information. They received a \$100 gift card incentive for participating in this study.

4. Analysis

Audio recordings of the interviews were de-identified and transcribed verbatim. Two researchers read all the transcripts, determined the meaning of the units from each interview, marked each deviation in meaning by using a keyword related to the units, and organized each interview based on the meaning of the units that yielded a sketch of the preliminary constituents. One of these researchers is an expert in qualitative research, and the other is also an expert in qualitative research and served as the president in the Academy of Qualitative research for the past 5 years. Thereafter, the researchers prepared condensed descriptions of the units and read them to synthesize their constituents and identify the essential meaning of the descriptions^{20,21)}. Disagreements were resolved by discussion. The findings were validated by sampling representative responses from the entire team.

Results

1. Demographics

Table 1 lists the participants in this study. All were KM clinicians who treated and counseled patients with obesity. Years of practicing medicine in specialized obesity KM clinics ranged from 1 to 10 years.

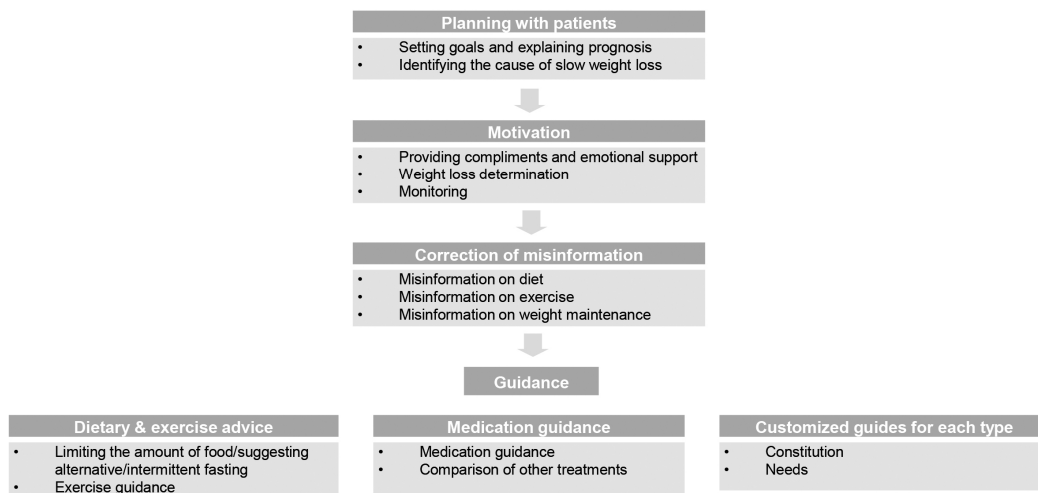


Fig. 1. Structure of obesity counseling in Korean medicine

2. The structure of obesity counseling

The six constituents of obesity counseling in KM identified were planning with patients, motivation, correcting misinformation on weight loss, dietary and exercise advice, medication guidance, and customized guides for each type (Fig. 1).

1) Planning with patients

Setting goals and explaining prognosis: Clinicians set the final and monthly goals for individual patients. If patients tried to lose weight recently, they adjusted their goals according to their status (Table 2; quote 1). The clinicians explained the prognosis, especially the changes in body composition. Changes in body composition started with fat loss followed by muscle loss (Table 2; quotes 2 and 3).

Table 1. Participant Demographics

Participants' ID	Sex	Age (at interview) (years)	Years practicing Korean Medicine	Years practicing Korean Medicine in obesity-specialized clinics
D1	Female	36	>10 years	3
D2	Male	37	>10 years	10
D3	Female	29	<5 years	1
D4	Female	27	<5 years	1
D5	Male	43	>10 years	10
D6	Male	37	>10 years	6
D7	Male	32	5–10 years	5
D8	Female	35	>10 years	5
D9	Male	33	5–10 years	4

Identifying the cause of slow weight loss: One of the clinicians' roles was to identify the cause of slow weight loss, define it, and correct the cause (Table 2, quotes 4 and 5).

2) Motivation

Compliment and emotional support: Clinicians saw weight gain as a response to chronic stress. Therefore, it is necessary to reward patients to handle this stress. Dieting can also be stressful; however, achieving weight loss and being acknowledged for it are the first rewards that patients can give themselves. Clinicians emphasized

that counseling for weight loss required encouragement or emotional support. They complimented the patients on their progress and told them to keep it up (Table 3; quote 1). Patients with obesity tend to have low self-esteem and negative thinking loops. Counseling is used to change patients' perspectives (Table 3, quote 2).

Weight loss determination (initial examination): An important factor in losing weight is to have patients complete their goals. Clinicians asked patients if their decision for weight loss was determined sincerely and made them commit to

Table 2. Quotations about Planning With Patients

1. "These are the things that should be noticed during the initial survey. Once I notice these things in the initial survey, I tell my patient, "since you have already lost 15 kg, the next realistic goal is to lose 5 kg or less. Even losing 5 kg can be hard." (D9)
2. "Say a patient loses 5-6 kg in the first 4 weeks. Of the 5-6 kg, 3-4 kg are lost in the first 2 weeks. We call these 2 weeks "the rapid weight loss phase." Once that phase is over, weight loss starts to plateau and becomes more gradual." (D7)
3. "That is why I tell my patients to lose muscle mass initially. I say this because there is a certain pattern to diets. When you lose 4 kcal of carbohydrates, you also lose 2.5 kg of water. In other words, you lose 2.5 g of water for every 1 g or 4 kcal of carbohydrates. You are losing 3.5 g for every 4 kcal you burn. Once you lose as much muscle as possible, you no longer lose any more muscle and instead begin losing fat. Once you start this fat-loss phase, it becomes extremely difficult to lose weight. Your body starts producing ketone bodies, which cause headaches and make your breath stink, skin itchy, and urine darker. Once you are in this phase, you need to burn 9 kcal to lose 1 g of fat. However, as I said earlier, fat burns after you lose all the water, drastically slowing down weight loss eight-fold. You eat as little and exercise as much as you used to, yet you cannot lose as much weight. Patients struggle a lot in this phase." (D5)
4. "A doctor knows why a patient struggles to lose weight. Perhaps the patient's body constitution makes weight loss difficult, or the patient is close to losing weight and just has to keep going. The doctor needs to help him/her plan his/her diet accordingly." (D8)
5. "As I reiterate, the purpose of counseling is to identify the exact reason why a patient is not seeing any weight loss and to correct the cause." (D9)

Table 3. Quotations about Motivation

1. "I tell them, 'it has been tough, right? It has been tough doing all this while trying to suppress your appetite?' Going on a diet is tough since you have to suppress your desires. I acknowledge this with my patients and acknowledge their effort." (D7)
2. "As I kept asking my patients more questions to pry out what they had done well, I became better at noticing what they had done well and what they had done incorrectly. I carefully discuss with my patients how we should go about fixing their problems during counseling" (D4)
3. "I ask them if they are determined to do so; 1 out of 10 patients returns home when asked this question. Patients go back because I ask them sincerely and tell them they can still be happy without going on a diet." (D5)
4. "I tell my patients that no matter how busy they are to come for the bioimpedance analysis and to say "hi" to me.", "If a patient wants to eat or drink but has a test the next day, he must abstain. If a patient has a bioimpedance test the next day, something scary that prevents him from eating might help him rethink and decide not to eat. This is one of the main reasons I have patients come in every week." (D5)

losing weight (Table 3, quote 3).

Monitoring: Clinicians played the role of a supervising figure (Table 3, quote 4). Patients were more apt to regulate their eating behavior while meeting with clinicians.

3) Correction of misinformation

Misinformation on diet: Controlling diet is mandatory for weight loss. Clinicians corrected the misinformation among patients who visited hoping for miracle medicine without diet control

and asked them to count what they eat (Table 4, quotes 1, 2, and 3).

Misinformation on exercise: Most patients have a misbelief that one must exercise to lose weight. However, excessive exercise causes patients to feel severely hungry and eat more. Eventually, excessive exercise is harmful to weight loss (Table 4, quotes 4 and 5).

Misinformation on weight maintenance: The participating clinicians agreed that weight loss is a lifelong journey, so patients should modify their

Table 4. Quotations about Correcting Misinformation

1. "I ask my patients if they have ever questioned why celebrities eat sweet potatoes in the washroom away from the eyes of their managers, work out till they are about to die while eating just enough to survive, or why celebrities try to survive with just one cup of protein shake and two sweet potatoes. If it is possible to lose weight and if such a medicine really exists, why would celebrities, who have a wider social network and are so much richer than me, choose not to take it?" (D5)
2. "Often, patients think they did not eat something, although they did." (D9)
3. "I do not persuade; I explain. I explain that one needs to reduce one's food portion to lose weight. Often, patients have the wrong idea that exercise is the way to lose weight. For these patients, I spend more time trying to correct their knowledge instead of persuading them. I explain why they must reduce their food intake. For example, a woman who weighs 50-60 kg can only lose 200 kcal from walking for one hour. For 30 days of continuous walking, that is only 6,000 kcal burned. One kg of fat has 8,000 kcal of energy, 8,000 kcal. I tell my patients, 'To lose 1 kcal of fat, you need to walk 40 h,' essentially telling them exercise does not significantly affect weight loss. One meal usually has 600 kcal. If you halve your food portion for breakfast, lunch, and dinner, that is already 300 kcal lost per meal, 900 kcal per day, right? You achieve the same effect from walking for 4-5 h simply by eating less. That is why I tell my patients who are trying to lose weight to focus on managing their diets instead of exercising. The problem is that patients struggle to reduce their food intake independently." (D7)
4. "I do not prescribe exercise that often. I believe exercise is not that necessary. For severely overweight patients, I tell them to lose weight first before beginning exercise because exercise itself can be burdensome for their bodies. I have also noticed that patients often feel hungrier after exercise, consequently giving in to the temptation of eating. For this reason, I do not teach my patients how to exercise. I tell them to walk for 30-40 minutes and not do anything extra." (D4)
5. "The hunger patients feel after working out hard cannot be controlled by medicines. This is why I tell my patients not to do vigorous exercises but start with walking. I emphasize that they should start muscle-strengthening exercises after losing all their fat." (D3)
6. "The probability of returning to the original weight after a successful diet is 98% after one year or 100% after two years. However, rarely do you see people who maintain their weight loss even after six years. Patients ask me how these people were successful in their weight loss. These people who succeed do not just go on a diet; they change their lives. Whether changing a job, a house, or mentality, they have undergone certain life changes. For example, one patient who succeeded in losing weight quit his job and became a spinning instructor. It is through these life changes that one's diet changes. You need to change your life to maintain your weight loss. If not, you just have temporary weight loss and return to your original weight." (D5)
7. "Once patients lose weight, they think it is okay to eat like they used to. They do not think they will go through the yo-yo effect because they no longer gain weight even after going back to their old diet. What is funny is when a patient has reverted to their old diet. If that patient is a female who is 150 cm tall, weighs 60 kg, and eats three meals a day plus fried chicken and beer at night, that is already considered overeating. Fat cells are also living cells that consume energy. I ask my patients the following question: 'Which of the following would use more gas? A fully loaded dump truck or an empty one?' Obviously, the former would use more gas. It is the same concept as weight. Once you lose weight, you use up less energy, so you need to eat less. Between a woman who is 150 cm tall and weighs 60 kg and another who is the same height but weighs 40 kg, who should eat less? The one who weighs 40 kg should eat less. I tell my patients to readjust their caloric intake once they have reached 40 kg." (D5)

lifestyle to maintain their weight (Table 5, Quote 6). In particular, eating habits and the reduction in the amount of food they consume should be maintained even if they succeed in losing weight (Table 4, quote 7).

4) Diet and exercise advice

Limiting the amount of food/suggesting alternative/intermittent fasting: The clinicians advised the patients to reduce the amount of food they consumed. Some clinicians handed out

menus (Table 5, quotes 1 and 2). Alternatives were provided if patients kept eating certain foods (Table 5, quotes 3 and 4). One clinician emphasized the importance of intermittent fasting (Table 5; quote 5). As patients are more prone to constipation in the diet process because they eat less, clinicians provided special recipes for constipation (Table 6, quote 6).

Exercise guidance: The contents of exercise guidance are similar to those of exercise misinformation. The warned their patients against

Table 5. Quotations about Diet and Exercise Advice

-
1. "There is not much to a diet. I just tell patients to reduce their food intake, and eat one meal per day. It may be cruel, although I only allow one meal per day. The quantity of that one meal does not matter, although I tell my patients to avoid fried food and eat protein. I highly recommend eggs and probiotics." (D5)
 2. "We make meal plans for different phases of a diet for our patients. The first 2 weeks are when the most weight loss occurs. Since most patients are employed and cannot completely avoid drinking, I just tell them to drink if they need to. After all, it is not important what you eat for your body constitution. What is important is to reduce the total caloric intake, and I tell my patients to try to do that. If my patient wants to eat fried chicken once in a while, that is fine. However, I still tell her/him to reduce the number of pieces eaten." (D7)
 3. "If a patient cannot avoid drinking because, for instance, she runs a bar, has plans with her husband for later, or for any other reasons, the doctor must be able to suggest alternatives or other methods to her. Without changing one's lifestyle, one is bound to gain weight again. A third person who can see things more objectively must guide the patient and provide her with alternatives. Two brains are better than one, after all." (D8)
 4. "There is a way to differentiate between fake hunger and real hunger. Eight out of ten times, we do not feel real hunger but dehydration. The brain falsely recognizes dehydration as hunger, making us eat. If my patient says that they are still feeling hungry after taking medications, I recommend drinking two cups of water, about 300 mL. I tell the patient to drink 300 mL of water and wait for five minutes. If the hunger subsides, that means the patient had fake hunger." (D6)
 5. "This is important to know. When you are on an intermittent diet, growth hormones are released starting 12 h after fasting, reaching the peak level at 24 h, and decreasing thereafter. This is why it is ideal to eat once every 24 h in terms of hormone levels. Moreover, although this is not an evidence-based idea, I believe that melatonin may also be involved. The video I am about to share with you presents you with some data that suggest that if you eat within 4 h before bed, you cannot lose weight even if you eat one meal per day and that your blood levels also worsen. For this reason, I advise my patients to eat around lunchtime. I used to think it was fine to eat in the morning, although the video suggests that since you still have melatonin until 2 h after waking up, you should not eat in the morning. According to the video, you should not eat within 2-4 h before bed and 2-4 h after waking up." (D5)
 6. "There is one more thing. The most annoying thing when you are on a diet is constipation. Since you are not eating anything, there is nothing to make feces with, meaning there is no stimulus to your bowel. Therefore, a small amount of fecal matter stays inside your bowel, absorbing water and hardening over time. Later, no matter how much you eat, you might still struggle with constipation. I always keep constipation pills in stock and prescribe them if my patients report having constipation. Lately, though, I tell my patients to always have boiled cabbages, broccoli, and tomatoes ready in the fridge and blend them with water and drink about 700 cm³ or 1 L of the mixture every meal. I tell them to make sure to eat it since it is healthy. It is like detox juice for the gastrointestinal tract since everything is boiled. You do not need to put in tomatoes, although, in any event, broccoli and cabbages are known to restore the gastrointestinal tract. Since introducing this diet, patients have complained less about constipation." (D5)
 7. "I have seen some patients go swimming after exercising. I tell them that it is okay to go swimming if they have already been doing it before starting their diet, although if not, do not do extra exercise. This is to prevent them from eating more to compensate for the extra energy lost." (D9)
-

excessive exercise to avoid an increased appetite (Table 5, quote 7).

5) Medication guidance

Medication guidance: It is obligatory for clinicians who prescribed medicine to give proper intake instructions and explain possible adverse reactions to the patients (Table 6; quotes 1 and 2).

Comparison with other treatments: Since there are various experts in obesity treatment, clinicians

explain their treatment by comparing it with other treatments and give correct answers about efficacy, safety, and possible adverse effects of other treatments to patients (Table 6; quotes 3 and 4).

6) Customized guides for each type

Constitution: Some clinicians used the patients' Sasang constitution to identify the cause of weight gain and advise their lifestyle according to the constitution (Table 7, quote 1).

Needs: The clinicians paid attention to the

Table 6. Quotations about Medication Guidance

1. "I explain things such as drug effects or adverse reactions and methods of administration." (D1)
2. "I frequently explain to my patients the uncomfortable symptoms they might experience after taking herbal medicines. If they call or visit me concerning these symptoms, we do a blood test or take any other appropriate actions to adjust their diagnosis or prescriptions." (D4)
3. "Medicines are psychotropic. That is why after 1-2 weeks, you immediately start developing tolerance. Whether phentermine or dietamine, you will develop tolerance within two weeks. You also feel less energetic over time as you take these drugs. So, patients use these medications to reduce their food intake, although that cannot last long. They lose stamina and eventually seek other treatments. Patients looking into Korean medicines often say traditional medicines are less effective than psychotropic appetite suppressants. However, as I said, psychotropic medications also lose their effectiveness after 1-2 weeks. Aside from the initial potency in the first 1-2 weeks, they have no other benefits. The diagnostic process is all the same for Western and Korean medicine. You do the bioimpedance analysis to explain the body composition and how weight loss happens. I explain the difference between Western and herbal medicines and how herbal medicines are not psychotropic, unlike Western medicines. How can any medicines suppress appetite? Appetite is just a human instinct. There is no way to suppress appetite 100%." (D7)
4. "I am familiar with trendy treatments and surgical methods. I believe it is important that I have enough knowledge to be able to answer my patients' questions about other experts' practice." (D7)

Table 7. Quotations about Customized Guides for Each Type

1. "I look at constitutions to identify the cause of weight gain. I provide different guidance depending on the body constitution. For example, those with the Tae-eum constitution are prone to gaining weight. These people are the most prone to gaining weight; therefore, for these patients, I tell them that as easy as it is for them to gain weight, it is also easy to lose weight. These patients gain weight easily because they eat well and absorb nutrients effectively. I tell them that they simply must control eating to lose weight; no other complicated methods are needed. The Soyang constitution is the next most common. These patients tend to gain weight due to stress rather than overeating. I explain this to them. I have also noticed that these patients tend to binge. I correct such eating habits and guide them on stress management or sleeping. Patients with the Soeum constitution are often not overweight, nor do they overeat since they have a poor digestive function. They gain weight because they eat small amounts frequently. Rather than being overweight overall, they have excess fat in certain parts of their bodies. I recommend lipolysis acupuncture or other procedures for these patients rather than prescribing medications. Thus, depending on the patient's constitution, my advice for the changes. I often look at the constitutions before guiding my patients on their lifestyles." (D4)
2. "For a doctor, patients' needs are the most important. Some patients seek miracle medicines. Some patients are satisfied with achieving healthier bodies even if they reach the goal of 5 kg weight loss. You need to identify a patient's needs. Say a middle-aged woman comes in, saying she wants to lose 10 kg. However, in reality, no one intends to lose 10 kg. She says that because she wants to get healthier along her weight loss journey, her children may start following her diet, and the family may get healthier. This is why it is important to identify your patient's needs. Nevertheless, some patients say their goal is not to be healthy but to lose weight." (D8)

patient's words, situation, and environment, identified their needs, and set appropriate goals (Table 7, quote 2).

Discussion

This study is the first to qualitatively elicit the structure and constituents of obesity counseling in KM. A qualitative study method can provide broad and rich information and straightforward descriptions of clinicians' perspectives on counseling for weight loss. This approach was useful in exploring the essential structure of weight counseling in KM²². An important finding of this study is that obesity counseling in KM is categorized into six constituents: planning with patients, motivation, correcting misinformation on weight loss, dietary and exercise advice, medication guidance, and customized guides for each type. A previous study included chart reviews on counseling for weight loss in KM in 2020; however, the chart had insufficient data and focused only on evaluating the patients' condition and habits²³.

Our findings suggest that the role of KM clinicians extends beyond prescribing medicine and covers the roles of dietitians and exercise therapists. Kushner et al. insisted that all patients should be counseled regarding evidence-based lifestyle approaches encompassing diet, physical activity, and behavioral change therapies as a foundation²⁴. While weight counseling in KM follows a simple rationale, namely reducing energy intake and increasing physical activity, clinicians with in-depth knowledge about obesity prescribe personalized guidelines encompassing

exercise, diet, and medications through an integrative approach²⁵. Accordingly, KM clinicians conduct this work themselves rather than referring patients to nutritionists or dietitians.

Since weight loss primarily depends on reducing total caloric intake²⁴, the correction of misinformation is mainly focused on reducing caloric intake. Thus, explaining the reasons for reducing caloric intake was emphasized based on recent research; for example, one technique for calorie reduction is intermittent fasting, which requires periods of voluntary abstinence from food and drink^{26,27}. The lack of correction of misinformation is evident in a recent systematic review of weight control registries, where weight loss maintenance was mainly correlated not with exercise (planned, structured, and repetitive bodily movement done to improve or maintain one or more components of physical fitness), but with physical activity (any bodily movement that increases energy expenditure; e.g., activities of daily living like walking, climbing stairs, gardening, and others) and total energy intake^{24,28}. Conversely, the difference between KM clinicians and other experts lies in understanding the patient's situation and finding alternative meal replacements, instead of forcing them to cut calories. Clinicians helped their patients set realistic physical activity goals, such as walking for an hour rather than jogging²⁹.

Some clinicians used the Sasang constitutional theory to categorize patients with obesity and advise their lifestyle according to their type³⁰. Sasang constitutional medicine is a tailored KM that classifies patients into four types: Taeyang, Soyang, Tae-eum, and Soeum. Each constitution is classified by characteristics of body shape,

face, voice, and psychological and physiological aspects. A previous cross-sectional study on 3,348 subjects revealed the prevalence of obesity varies according to Sasang constitution; particularly Tae-eum was highly associated with an increased odds ratio for abdominal obesity. Thus far, the Sasang constitution has been considered a risk factor in predicting obesity³⁰.

Establishing reasonable goals is important in obesity care. Patients with obesity often desire to achieve ideal weight; however, setting and accepting a modest weight loss goal is critical to prevent future disappointment and maintain motivation; thus, clinicians should view treatment for obesity as a lifelong process²⁹. Clinicians should make patients aware of the need for continuous weight maintenance efforts, even after initial successful weight loss. Many factors, including environment, physiology, and behavior, may contribute to weight maintenance, much like the saying, “you need to change your life if you want to maintain weight.” Specifically, these changes involve regular breakfast intake, increased consumption of vegetables and fiber-rich foods, limited intake of certain types of foods such as fatty and sugary foods, consumption of healthy foods and few high-fat foods available at home, and having regular meal frequency according to weight control registries²⁸.

Interestingly, the counseling was based on compliments and emotional support. This mirrors the research of Serdula et al.²⁹; the more physicians counsel with an empathetic attitude and recognize the challenges and frustrations involved in trying to lose weight, the more likely the patient will feel supported and understood.

Commitment to weight loss is similar to 5A, which asks about the patient’s readiness to lose weight, in the management algorithm for obesity in primary care³¹. This indicates that clinicians should determine if patients are motivated to lose weight and assess patients’ willingness to invest substantial time, effort, and expenses required for weight loss treatment. Frequent monitoring is important, as a significant association between monitoring and weight loss was consistently found in a systematic review³². Continuous monitoring by clinicians also facilitates communication with patients.

Patients with obesity have plenty of accessible information and seek a healthy and effective way to lose weight. Interestingly, one of the least frequently reported strategies from people who succeeded in weight loss was information seeking (seeking weight loss information online)²⁸. Therefore, clinicians should be aware of the possible treatment options and provide accurate information about treatments, efficacy, safety, and possible adverse effects. In addition, all clinicians should be educated to provide standardized and effective counseling using a manual⁸. A previous chart review reported diverse counseling quality and content among KM clinicians. The lack of specific guidance in obesity counseling could be improved through education and dissemination of the manual²³.

This study had some limitations. Because of the nature of qualitative research, the findings cannot be extrapolated to all clinicians and should be considered with regard to the generalizability of findings.

In conclusion, counseling for weight loss in

KM encompasses a variety of themes, including diet, exercise, motivation, goal setting, and advice for each patient type. Clinicians with in-depth knowledge about obesity should prescribe personalized guidelines encompassing exercise, diet, and medication through an integrative approach. This study provides an in-depth understanding of obesity counseling in KM. The constituents could guide clinicians' counseling in obesity care. Future studies should investigate the efficacy of counseling in clinical trials.

Acknowledgments

The authors would like to thank the participants of this study and the Society of Korean Medicine for Obesity Research.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Funding

This research was supported by the Association of Korean Medicine (ERN1911130), the Korea Institute of Oriental Medicine (KSN2022210), and the Korea Health Technology R&D Project through the Korea Health Industry Development Institute (HF20C0208). The funders have no role in the review, preparation of the manuscript, or decision to publish.

Data Availability Statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

References

1. Chooi, Y. C., Ding, C., & Magkos, F. (2019). The epidemiology of obesity. *Metabolism - Clinical and Experimental*. 92(6-10). 10.1016/j.metabol.2018.09.005
2. Blüher, M. (2019). Obesity: Global epidemiology and pathogenesis. *Nature Reviews Endocrinology*. 15(5). 288-298. 10.1038/s41574-019-0176-8
3. Welfare, M. o. H. a. (2018). National obesity management comprehensive measures. Ministry of Health and Welfare.
4. Seo, M. H., Lee, W. Y., Kim, S. S., Kang, J. H., Kang, J. H., Kim, K. K., et al. (2019). 2018 korean society for the study of obesity guideline for the management of obesity in korea. *J Obes Metab Syndr*. 28(1). 40-45. 10.7570/jomes.2019.28.1.40
5. Lee, S.-Y. (2017). Latest perspective on obesity treatment: Focused on obesity treatment guidelines of the korean society of obesity. *Journal of Korean Society of Health-system Pharmacists*. 34(3). 267-274.
6. Bray, G. A., Frühbeck, G., Ryan, D. H., & Wilding, J. P. H. (2016). Management of obesity. *The Lancet*. 387(10031). 1947-1956. 10.1016/S0140-6736(16)00271-3
7. Kim, Y. (2008). Developing a manual for national screening and counseling of people in a transitional period. *Health and Welfare*

- Forum. 2008(7). 42-57.
8. Chung, W. S.Kim, K. W.Jo, J. Y. & Kim, H. (2019). Development of manual for standard counseling of obesity patients in korean medicine. *J Korean Med Obes Res.* 19(2).
 9. Petrin, C.Kahan, S.Turner, M.Gallagher, C. & Dietz, W. H. (2017). Current attitudes and practices of obesity counselling by health care providers. *Obesity Research & Clinical Practice.* 11(3). 352-359. <https://doi.org/10.1016/j.orcp.2016.08.005>
 10. Sonntag, U.Brink, A.Renneberg, B.Braun, V. & Heintze, C. (2012). Gps' attitudes, objectives and barriers in counselling for obesity--a qualitative study. *Eur J Gen Pract.* 18(1). 9-14. [10.3109/13814788.2011.627424](https://doi.org/10.3109/13814788.2011.627424)
 11. Leverage, R. R.Williams, R. L.Sussman, A. & Crabtree, B. F. (2007). Obesity counseling and guidelines in primary care: A qualitative study. *American Journal of Preventive Medicine.* 32(4). 334-339.e331. <https://doi.org/10.1016/j.amepre.2006.12.008>
 12. McHale, C. T.Laidlaw, A. H. & Cecil, J. E. (2020). Primary care patient and practitioner views of weight and weight-related discussion: A mixed-methods study. *BMJ Open.* 10(3). e034023. [10.1136/bmjopen-2019-034023](https://doi.org/10.1136/bmjopen-2019-034023)
 13. Schauer, G. L.Woodruff, R. C.Hotz, J. & Kegler, M. C. (2014). A qualitative inquiry about weight counseling practices in community health centers. *Patient Education and Counseling.* 97(1). 82-87. <https://doi.org/10.1016/j.pec.2014.05.026>
 14. Teixeira, F. V.Pais-Ribeiro, J. L. & Maia, A. (2015). A qualitative study of gps' views towards obesity: Are they fighting or giving up? *Public Health.* 129(3). 218-225. <https://doi.org/10.1016/j.puhe.2015.01.004>
 15. Oh, J.-A. (2004). A trend of specialized clinics blows to the korean medicine clinic (3)-obesity. *The Minjok Medicine News.*
 16. Ok, S.-j. (2010). Behavior and obesity clinic satisfaction factors and the perceived effects. Sungshin Women's University.
 17. Choi, H. & Choi, S. (2006). Introduction of 3 dimensional approach for weight control: A case of yangsung program. *Journal of Korean Medicine for Obesity Research.* 6(1). 117-132.
 18. Etikan, I.Musa, S. A.Alkassim, R. S. J. A. j. o. t. & statistics, a. (2016). Comparison of convenience sampling and purposive sampling. *Journal of Statistics.* 5(1). 1-4.
 19. Goodman, L. A. (1961). Snowball sampling. *The annals of mathematical statistics.* 148-170.
 20. Giorgi, A.Aanstoos, C.Aanstoos, C. M.Fischer, W. F. & Wertz, F. J. (1985). Phenomenology and psychological research. Duquesne University Press.
 21. Lee, N. (2014). Phenomenology and qualitative research: A horizon in applied phenomenology. Hangilsa.
 22. Kim, S.Han, K. & Lee, J.-H. (2020). Qualitative study on the key elements of obesity counseling in korean medicine. *Journal of Korean Medicine.* 99(46).
 23. Han, K. & Kim, S. (2020). A study on the counseling practice for obesity in korean medicine clinics and the satisfaction for counseling manual for the standardized management of obesity in korean medicine. *Journal of Korean Medicine for Obesity*

- Research. 20(2). 131-137.
24. Kushner, R. F. (2014). Weight loss strategies for treatment of obesity. *Progress in cardiovascular diseases*. 56(4). 465-472.
 25. Han, J. & Yang, W. (2014). A review on korean medicine and personalized medicine: Syndrome-based personalized medicine on the basis of syndrome differentiation and treatment. *Journal of Korean Medicine*. 35(3). 40-48.
 26. Chaix, A. Manoojian, E. N. C. Melkani, G. C. & Panda, S. (2019). Time-restricted eating to prevent and manage chronic metabolic diseases. *Annual Review of Nutrition*. 39(1). 291-315. 10.1146/annurev-nutr-082018-124320
 27. Patterson, R. E. & Sears, D. D. (2017). Metabolic effects of intermittent fasting. *Annual Review of Nutrition*. 37(1). 371-393. 10.1146/annurev-nutr-071816-064634
 28. Paixão, C., Dias, C. M., Jorge, R., Carraça, E. V., Yannakoulia, M., de Zwaan, M., et al. (2020). Successful weight loss maintenance: A systematic review of weight control registries. *Obesity Reviews*. 21(5). e13003.
 29. Serdula, M. K. Khan, L. K. & Dietz, W. H. (2003). Weight loss counseling revisited. *Jama*. 289(14). 1747-1750.
 30. Baek, Y. Park, K. Lee, S. & Jang, E. (2014). The prevalence of general and abdominal obesity according to sasang constitution in korea. *BMC Complement Altern Med*. 14(298). 10.1186/1472-6882-14-298
 31. Welzel, F. D., Bär, J., Stein, J., Löbner, M., Pabst, A., Lupp, M., et al. (2021). Using a brief web-based 5a intervention to improve weight management in primary care: Results of a cluster-randomized controlled trial. *BMC Family Practice*. 22(1). 1-16.
 32. Burke, L. E. Wang, J. & Sevvick, M. A. (2011). Self-monitoring in weight loss: A systematic review of the literature. *Journal of the American Dietetic Association*. 111(1). 92-102.

ORCID

- | | |
|-----------------|---|
| Sungha Kim | https://orcid.org/0000-0001-5542-3850 |
| Seung Eun Chung | https://orcid.org/0000-0002-3713-5721 |
| Kyungsun Han | https://orcid.org/0000-0002-9710-7845 |
| Sunmi Choi | https://orcid.org/0000-0001-5192-4391 |
| Jun-Hwan Lee | https://orcid.org/0000-0001-5730-6869 |