Behavior Therapy for Nutritional Counseling

—In cooperation with registered dietitians—

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Yoshiko ADACHI

Director, Institute of Behavioral Health

Abstract: Behavior therapy is a psychotherapy based on the behavioral sciences. Recent studies have revealed that it is most efficient for modifying clients' adherence, life-style, and health care behaviors. Its benefits are that the target behaviors are broad, the problem solving methods are practical, there are many flexible techniques, and furthermore, convenient approaches using standardized self-reference manuals or computerized programs can produce effects. These aspects and features are very beneficial and contribute sufficiently to nutritional education or dietary therapy by physicians. In the author's researches on obesity, hypercholesterolemia, and diabetes mellitus, the programs were comprehensive and the target behaviors consisted of eating, physical activities, interpersonal communications, behaviors for coping with stress, and maladaptive cognition. The techniques of behavior modification included target setting, self-monitoring, stimulus control, operant reinforcement, social skills training, cognitive restructuring, response prevention, and social support. All data showed that these behavioral approaches were effective. Recent studies on the one month's correspondent weight loss program have found that setting targets keeping a record of weight and progress related to targeted behaviors produce a weight loss of mean 1kg per month. If physicians can show their patients the reasons necessary for eating modifications and a suitable outline for dietary therapy, the registered dietician could then discuss what, how much, and how to eat with the referred patients, and give them the necessary practical advice. In this process, the individual target behavior and the monitoring sheet would become the common guide for the associated physicians, registered dietitians, and the patients. The goal of these cooperative team activities would be to build patients' self-care and self-control behaviors.

Key words: Behavior therapy; Nutritional education; Lifestyle modification; Cooperative team work; Patient's self-care

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Introduction

People generally understand that living healthily is the best way to control problems like diabetes mellitus, hypertension, hyperlipidemia and obesity. Keeping up a well-balanced diet, reasonable weight and regular exercise is a better cure than artificial medication. However, what people know is good for them and what they actually do tend to be very different. We constantly hear comments like, "I really worked at it, but lapsed after a month," "I don't know how to actually set about dieting," and "I understand what I need to do, but can't put it into practice."

Behavior therapy is a scientific psychotherapy that aims to modify people's behavior and habits in line with their life goals.[1] This therapy was pioneered in the 1950s on the basis of classical conditioning and operant conditioning theory. At first, it targeted problems like psychosis and developmental disorders. It proved remarkably efficient in overcoming these very difficult problems. By the 1970s, the therapy had evolved to tackle obesity, hypertension and psychosomatic disorders. In recent years, Japan has experienced a surge of interest in the application of behavior therapy to health promotion and disease prevention.[2]

To date, the author has worked on behavioral therapy for obesity, diabetes mellitus and hypercholesterolemia in Japan. The therapy has turned out be very effective for Japanese patients, so its application plainly goes beyond its Western origins.

All the therapeutic programs involved a comprehensive approach. They included goal setting, self-monitoring, operant reinforcement, stimulus control, response prevention, cognitive restructuring, social skills training and lifestyle factors (regular exercise, stress prevention and communication skills) in addition to diet. However, this article focuses on diet and nutritional education.

Physician-Specific Issues in Nutritional Education

Generally physicians have not had training in nutritional education, and are too busy to spend time becoming adept at it. Even if they realize the importance of nutritional education, they may tend to deal with it only briefly, or pass it on to a registered dietician. The common image of nutritional education is that it merely involves advice on the nutrients in foods; how many calories are required to produce energy, the recommended intake of protein and fat in grams, vitamin units and so on.

However, behavior therapy is really about self-control over cravings, and controlling one's eating environment sensibly. Of course, information on the nutritional components of foods (the dietitian's field) is also important. Nonetheless, since eating is a fundamental behavior for everyone, physicians are well placed to grasp the general rules of a healthy diet and provide useful advice.

For patients, a single word from their physician can have a major impact. If the physician plans the goals and steps for dietary therapy on a pathological basis, the dietician can follow this up with specific, detailed guidance. If the physician and dietician can define their roles clearly along such lines, the outcome for the patient will surely be better.

Self-reference manuals and computer assignments are helpful in providing concrete schedules for behavioral therapy. In the author's experience, a schedule involving simple, specific goals (such as keeping a regular record of one's weight, and limiting one's rice intake to one bowl at meals) resulted in a significantly healthier lifestyle and a mean weight loss of 1 kg.[4]

This kind of nutritional counseling is easy for patients to understand and put into practice. It should also be easy for physicians and dieticians to work together to give guidelines of this kind.

This article outlines the behavioral charac-

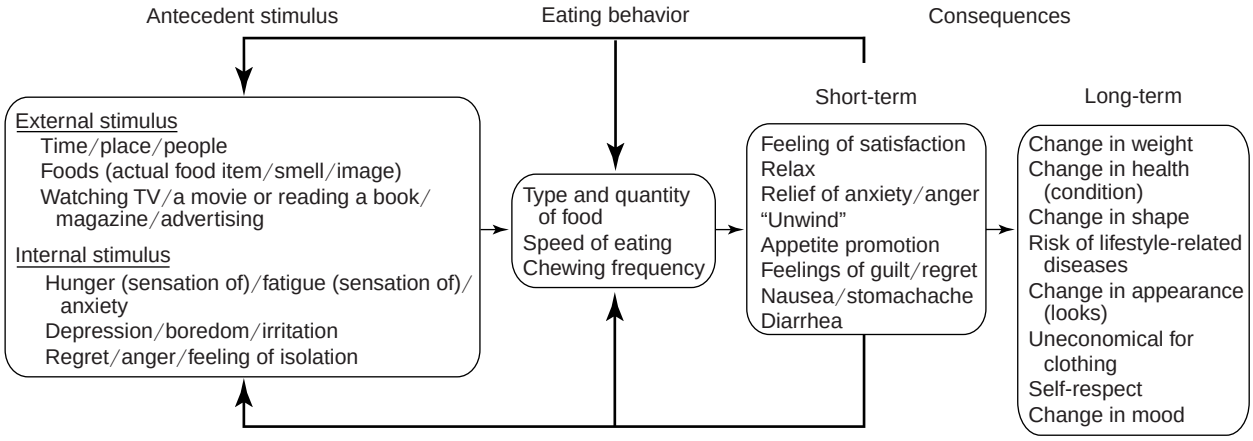

Fig. 1 Model of eating behavior
Antecedent stimulus includes both conditioned stimulus and discriminative stimulus. Behavior refers to the strong influence received immediately after a consequence happens (short-term), as opposed to potential future occurrences. In addition, the event (incident) generated by a behavior will become an antecedent stimulus leading to the formation of a behavior chain.

teristics of eating and goes on to discuss practical nutritional education based on behavioral science. It concludes by suggesting a basic structure for conducting therapy.

Characteristics of Eating Behavior

It goes without saying that eating behavior is indispensable to the maintenance of life, and is a behavior we perform automatically, without ordinarily being conscious of its particularities. Furthermore, as with the use of bait to train animals, 'food' exerts a major influence on behavior and represents a powerful stimulus. Eating is also entertainment and consolation, it is a social and cultural activity.

In addition, behaviors including 'eating as much as possible,' 'the preference for sweet and high-fat foods' and 'conserving energy when unable to eat,' were acquired over several million years from primeval times in response to an environment of scarce food resources. These behaviors represent basic human adaptive characteristics that were valuable in long human history but have become negative factors in our modern society, where unhealthily rich foods and sedentary lifestyles make everyone prone to eat too much.

The main stimulus for unhealthy eating behavior involves conditioning in which sensations of hunger and satisfaction become particularly intense (Fig. 1). Here, resisting hunger pangs leads to pain, people reach for their favorite snacks even on a full stomach, and snacking while watching TV becomes habitual. Eating becomes directly connected with feelings, and people will eat when bored, or use food as a way of coping with feelings of anxiety, anger or nervousness. In this way, the feelings that come before eating, and the sense of reward that is experienced immediately after, exert a powerful stimulus on behavior. The model for eating behavior becomes the exact opposite of the healthy physical activity model, as depicted above.

Furthermore, since human beings are programmed by nature to eat as much possible, restraining one's eating to the extent of fasting or dieting may seem unnatural and stressful.[5] Loss of control in eating snack foods among chronic dieters, and overeating under the influence of alcohol or as the result of depression, are well known examples of this phenomenon.

In many cases, the restrictions on eating imposed by diet therapies only serve to reinforce chronic dieting. Counselors, then, need to

realize that dieting is inherently problematic, and that on occasion dieting has the potential to trigger depression and abnormal eating behavior.

Behavioral Nutritional Counseling in Practice

In practice, nutritional counseling involves establishing specific and practical goals. These goals will be based on assessment of a patient's lifestyle, including their dietary and exercise habits, and will also take into account their clinical history and medical data. These tasks are known as 'behavioral assessment and goal setting' and equate to the 'diagnosis and treatment policies' conducted by physicians.

It must be possible to put all the goals that are set into actual practice. It is also vital to encourage patients to believe in their own abilities to reach their goals. To this end, the following must be given due consideration. (1) Assessments should be conducted without prejudice; and the facts must be evaluated honestly. (2) In setting goals, the patients intentions should be respected and goals chosen in terms of whether they can be reached. (3) Teaching materials should be easy to understand, with information presented in a concise format. In addition, behavioral goals should be objective and specific, such as 'Eat just one sweet as a snack between meals' or 'Limit alcohol to one 350 cc beer.' Goals should be selected on the basis that there is a 70–80% chance of reaching them so long as the patient makes a reasonable effort. Reducing psychological resistance to healthy new behavior and encouraging patients to actually begin this is also important. Once a patient gets started it will become easier for them to advance to the next stage. Even if a patient's diet remains very problematic after starting, the patient will at least be exercising caution. A small improvement is better than no improvement at all. The counselor's job is to identify and encourage any small signs of improvement, and to build up the self-respect and motivation of the patient.

Getting patients to conduct self-monitoring by recording adherence/non-adherence to behaviors that have been set as goals is very effective in helping them to reach those goals. Self-monitoring will naturally include the recording of weight, blood pressure and blood sugar values. Patients should be given a formatted sheet and asked to complete sections with the therapist's assistance. This will help to make the problem areas and goals become real and important. As mentioned above, if patients can be encouraged to carry out this self-monitoring, positive results can be expected from the program (Table 1).

There are various other specific techniques that will help improve eating habits. These techniques include stimulus control techniques such as 'While eating, don't do other activities' (e.g. don't watch TV while eating), 'Keep foods out of sight except at proper mealtimes,' 'Count the number of times you chew' and 'Eat small mouthfuls.' This kind of advice will promote slower consumption of food. Other techniques include doing something else (e.g. taking a shower or going for a walk) when the urge to eat arises.[6)]

Furthermore, since breaking habits — and dietary habits in particular — is an inherently difficult process, step-by-step modifications with gradual progress to the next stage are more likely to produce results. Abrupt changes are liable to cause harmful rebounds.

The most important point is for physicians and dietitians to recognize that they represent the patient's social support. They need to consciously use the principles of operant conditioning (reinforcing). This means rewarding good behavior patterns with praise and encouragement. In other words, consultations should not be linked entirely to changes in laboratory values. They should focus on actual behavior; acknowledging even small improvements. This will give patients great help in staying motivated. Even in the face of undesirable results, doctors and nutritionists should avoid blaming

Table 1 A Specific Example of Eating Modification

1. goal-setting	• Specify behavioral objectives (weight/diet/exercise/dealing with hunger).
2. self-monitoring	• Record eating behavior (content/quantity/time/place/mood). • Record your weight. • Record adherence/non-adherence to behavioral objectives (diet/exercise/dealing with hunger).
3. operant reinforcement	• Rate your behavioral goals, affix seals to your attendance sheet. • Praise desirable eating behavior and exercise behavior. • Give yourself a bonus (reward) when you lose weight, e.g. purchase a new item of clothing.
4. stimulus control	• Eat at regular times, in a fixed place, using fixed tableware. • Do nothing else while eating; devote yourself to meals. • Decide how much you are going to eat and serve yourself to a single helping. • Keep foods out of sight.
5. response prevention	• Wait 5-minutes, even if you have the urge to eat. • Use alternatives to eating like exercise or reading if you have the urge to eat. • Eat cucumber or celery if you are unable to resist the temptation to eat.
6. modification of eating	• Eat small mouthfuls; put your chopsticks down between bites. • Count the number of times you chew; use your other (non-dexterous) hand to eat.
7. social skills training	• Use role-play to practice refusing offers of food. • Practice polite ways of refusing that will not offend the person offering the food.
8. cognitive restructuring	• Vocalize words of encouragement if you feel disheartened (self-talk). • I want to eat sweet things . . . it's only because you are bored. • My parents are overweight too . . . lifestyle factors play a major role (in this phenomenon). • Improve your image of your body and your self-image.
9. relapse prevention training	• Predict high-risk situations and practice handling them. • If your weight exceeds the upper limit, resume efforts to lose weight again. • Continue to exercise, find ways of dealing with stress.
10. social support	• Elicit the cooperation of your family, spouse or friends. • Attend group meetings and maintain contact with your treating physician.

patients and should instead focus on what is causing patients to fail. Goals should be modified so that the patient can begin to make achievements.

As patients improve it is easy to fall into the trap of thinking that 'achieving improvements is only natural.' Signs of progress should still be used as opportunities for providing feedback in order to sustain the patient's motivation over the long term.

The Basics and Benefits of Counseling Based on Behavior Therapy

The principle objectives of behavior therapy can be summarized as 'preparing a healthy environment and promoting self-control techniques that will help healthy behaviors' (Fig. 2). The behaviors referred to here are not only visible behaviors, but also include positive intentions and feelings.

Desirable behaviors need to be defined according to what the patient can actually achieve, and they need to be put in specific terms. The therapist then needs to offer ongoing monitoring and encouragement. This is identical to conventional treatment and counseling. Indeed, the treatment process for behavior therapy deliberately follows the path of operant conditioning theory.

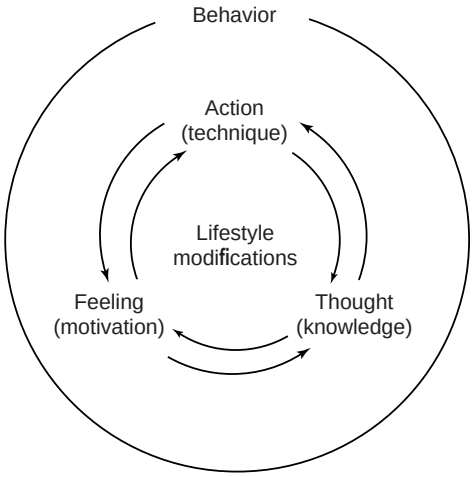

Fig. 2 Three components of behavior

Moreover, since behavior therapy offers a realistic step-by-step approach that evolves from attainable goals and is flexible to the patient's needs, most people are receptive to it.

This author believes that the theory and methods of behavior therapy can be utilized in daily life, any time, anywhere and by anyone, to address everything from time management to interpersonal relationships. Once the principles underpinning the theory are understood, the therapy can be employed by anyone irrespective of their professional discipline. The theory also allows the patients themselves to embark upon a course of self-learning. Even in the absence of time and human resources, tools such as self-manuals[7] and correspondence counseling programs are available and effective.[3]

Even for diseases such as bulimia and obsessive-compulsive neurosis, which are particularly difficult to treat, the movement toward guided self-treatment with manuals is a global trend.[8] There are few behavior therapy specialists, even internationally, for the reason that the treatment is conducted only by interviews and takes a great deal of effort.

Team treatment involving both physicians and dietitians is perfectly possible. If physicians can provide the motivation for patients to receive nutritional guidance, then registered dietitians and nurses can establish goals and offer continuous counseling. Ideally, the treatment team would hold study meetings ahead of time, read the same teaching materials and share knowledge on behavioral therapy for nutritional counseling. In this sense, the guidelines for behavioral therapy by team treatment can be likened to the musical score for an orchestra. The conductor of the treatment should by all means be the physician. This will help ensure that the team, inclusive of the patient, is able to create beautiful harmonies.

'Behavior' by our definition includes feelings and thoughts that are not externally visible. Actions, feelings, and thoughts should be treated in conjunction, as parts of the same whole.

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