

Is the Desired Body Image can be a Driving Force for Light Food Consumption?

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Abstract

Background

Replacing light beverages and foods with ordinary products is a behavioral attitude to balance healthy weight. Body image is one of the driving affect for changing eating habit. Including the low calorie products in diet is one of the methods of lowering energy.

Objective

In present study we aimed to assess perception and consumption of light products by consumers and to evaluate whether the desired body image can be a driving force for light food consumption.

Design

A questionnaire including demographic parameters and body image of consumers, light-food perception, their awareness and consumption of low calorie products were applied to fifty participants participated in the study.

Outcomes Examined

The demographic and anthropometric data collected with a questionnaire. The perception and consumption of light foods were examined. Body images and desired body images were compared and related to light food consumption.

Statistical Analysis

The Statistical Package for Social Sciences (SPSS, version 18.0) was used to calculate the means ± standard deviation and percentages.

Results

Among 50 participants, the percent distributions were 12% underweights, 42% normal, 28% overweights and 18% obese. Comparison of the current and desired body images of consumers indicated that the most desired body image figure was number 3 (56%). The participants declared that light foods were mostly include low calorie and low fat. Limited number of consumers accepted the light foods as healthy foods. The amount and nutritive value of foods were the most important parameters that affected their decision when they bought light products.

Conclusions

The perception and consumption of light foods vary among participated population. Light foods mostly accepted as low calorie and low fat foods. The most controversial issue was whether the low calorie foods are good for health or not. Approximately half of the participants do not seem satisfied with their body images, and desire to be leaner. Consistently, sixtytwo percent declared to consume light products.

Keywords: Light food perception; Light food consumption; Body image; Low calorie beverages and foods; Low fat foods

Introduction

Lowering calorie intake is essential in managing a healthy weight. This can be achieved by reducing sugar and fat in diet. In our study, we intended to examine whether there is any discrepancy of perception and consumption for light foods. Labeling light foods are regulated by national laws and regulations. In Turkey, light food is described as the food reduced in calories by at least 30 percent [1]. FDA's definition for "light" means a food which has been significantly reduced in fat, calories or sodium [2]. Light foods can be consumed as liquid or solid. Most of them, specifically liquid ones, include low calorie sweeteners such as acesulfame potassium, aspartame, neotame, saccharin, stevia, sucralose, tagatose, and polyols [3,4] which stimulate the human sweet-taste receptor[5].

Making the appropriate food choices is one of the major health challenges. Nutritional label affect the consumer's decision on which product they will buy[6]. It was shown that overweight and obese prefer to eat more calories of food when it is labeled as "low fat" than when it is labeled as "regular" leading to the overconsumption of nutrient-poor and calorie-rich snack foods [7]. In addition, consumers are unable to monitor the number of calories they consume [8] since they tend to overeat low fat products without awareness of this tendency [9]. This may affect eating habit, increasing calories and consequently gaining weight. In combination with physical activity, lowering the energy from consumed food and drink is essential in achieving and maintaining a healthy weight. In the past four decades, obesity in both adults and children has increased dramatically [10]. Light food consumers usually tend to keep their weight in a balance and ideal body image. Body image defined as a basic component of personality based on subjective and individual perception. Negative body image concerns and dissatisfaction to continue to escalate in all age groups, but highly common in adolescence period which characterized by intense physical changes and regulations. People who are thinking of the relation between low calorie products and body image use food labels to guide their food choices. However, consumers are mostly unable to monitor the light beverages-foods and number of calories they consume. In present paper, we aimed to identify the light product perception of consumers and correlate their preferences with their body images.

Materials and Methods

This was a cross sectional study included 50 university students and staff between April and May 2014. The participants were voluntary and those who had a history of chronic diseases were not included to the study. The participants working/studying in Istanbul Medipol University (Turkey) were interviewed face to face by using pre-tested questionnaire. Data was obtained from the subjects through the participants' own declaration. The query involved demographic and anthropometric information, the perception and consumption of light beverages and foods. BMI values were calculated from recorded weight and height of consumers. BMI values were classified as underweight (<18.5 kg/m²), normal weight (18.5-24.9 kg/m²), overweight (25-29.9 kg/m²), and obese (30-39.9 kg/m²) [11]. Current and desired body images were measured using the Figure Rating Scale which consists of nine female and male figures numbered 1 to 9, ranging from very thin to very obese, by developed Stunkard et al. [12]. The participants were asked to select their current figure and the figure they desired to be.

The Statistical Package for Social Sciences version 18.0 (SPSS, Chicago, IL, USA) was used to calculate the means ± standard deviation and percentages.

Results

This was a cross-sectional study including 19 women and 31 men randomly selected from the population of students and staff working at Istanbul Medipol University. Demographic and anthropometric parameters of the light food consumers are shown in Table 1. The age distribution of participants were 18-24 years (74%), 25-30 years (14%), 31-45 years (8%) and over 46 years (2%). Among 50 participants 8 were married. BMI values indicated that 12% was underweight, 42% was normal, 28% was overweight, and 18% was obese.

Table 1. Demographic and anthropometric parameters of the fifty consumers.

Parameter	n	Percentage (%)	Mean ± SD
Women	19	38	
Men	31	62	
Body weight (kg)			65.59±11.48
Body length (cm)			167.14±9.52
Age (years)			
18-24	37	74	
25-30	7	14	
31-45	4	8	
≥46	1	2	
Married	8	16	
Unmarried	42	84	
BMI ^a (kg/m ²)			
<18.5 (underweight)	6	12	
18.5-24.9 (normal)	21	42	
25.0-29.9 (overweight)	14	28	
≥ 30 (obese)	9	18	

^aBMI: body massindex

The light food perception and consumption varied among participants as seen in Table 2 and Table 3. They described light food as low calorie (36%) and low fat (30%) foods in a similar manner with their consumption behaviour (low calorie, 42%; low fat, 26%). Eighty two percent (82%) declared that the low calorie foods were healthy foods. Indeed this reflected to their consuming habit; the majority of population (74%) expressed to buy the light products because of their beneficial effects. Twenty two percent declared that they can consume light foods at any age. However, fifty four percent believed the consumption period is important. Nearly half of the participants (52%) defined that low calorie foods lost their nutrient value. Thirty eight percent defined that consumption of low calorie foods affected their eating habits.

Table 2. The light product perception was queried by a questionnaire.

Questions and answers are given below.	
Questions and answers	%
How do you describe "light food" ?	
Low fat	30
Low calorie	36
Unhealthy foods	14
Other	20
Are they healthy foods?	
Yes	10
No	18
Some	72
Is it safe to consume at any age?	
Yes	22
No	78
Is consumption period important?	
Yes	54
No	46
Do you believe that light products lose their nutrient value?	
Yes	52
No	48
Are there any effect of consumption of light products on your eating habits?	
Yes	38
No	62

Light product consumption of participants was summarized in Table 3. Contrary to expectations, most of the participants (76%) declared not to consume light foods when they are on diet. Ninety percent (90%) did not accept unlimited consumption of light foods. Softdrinks (34%), milk and dairy products (20%), cookies (18%) and low calorie sweets (16%) were commonly consumed light foods. The daily light food consumers was 14%. The consumption of products was mostly preferred in between meals (40%), rather than in main meal (4%). Participants preferred to buy the low calorie products considering amount (60%), nutritive value (20%), consumption frequency (8%), consumption period (6%), type (4%) and cost (2%) of light-products.

Table 3. Questions and answers of the participants about light product consumption.

Questions and answers	%
Do you consume light products every day?	
Yes	14
No	86
When do you prefer to have light products?	
Between meals	40
Never taken	38
In two days	18
Main meal	4

Do you believe that light products have beneficial health effects?	
Yes	74
No	26
Do you consume unlimited amount of light products?	
Yes	10
No	90
Do you prefer light products when you are on diet?	
Yes	24
No	76
Why do you prefer light products? Because of...	
Low calorie	46
High fiber	28
Low fat	26
Which light product/s do you prefer?	
Softdrinks	34
Milk and dairy products	20
Cookies	18
Low calorie sweets	16
None	12
Which one is the first parameter that affect your decision when you buy light products?	
Amount	60.0
Nutritive value	20.0
Frequency	8.0
Consumption period	6.0
Type	4.0
Cost	2.0

A comparison between the light food consumption and perception was shown in Figure 1. The lowest difference was defined for low calorie (10) and low fat (4) parameters; the highest difference was for the acceptance of light foods as "healthy"foods (64), followed by consumption period (48), nutrient value (32) and safety (12) of light foods.

The body image figure numbers and percentages of participants were four (32%), three (18%), five (18%), six (16%), two (12%) and seven (4%). However, they pointed desired body image three (56%), four (18%), two (12%), five (12%), six (2%) and seven (0%). Although, only 18% of participants had real body image of figure 3, the most desired body image for figure 3 was 56% indicating that the majority of participants dissatisfied with their body images (Figure 2).

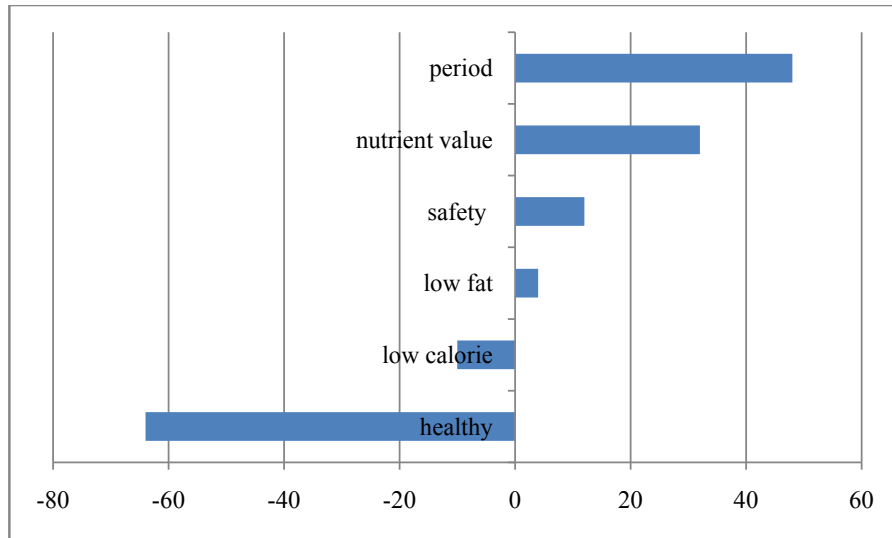


Figure1. Differences between perception and consumption of participants for light foods. Negative difference states that the consumption percentage is higher than the perception percentage. Positive difference states that the perception percentage is higher than the consumption percentage. The biggest hesitation is on healthiness of lightfoods. Both perception and consumption of light food appears to be similar for low fat and low calorie foods.

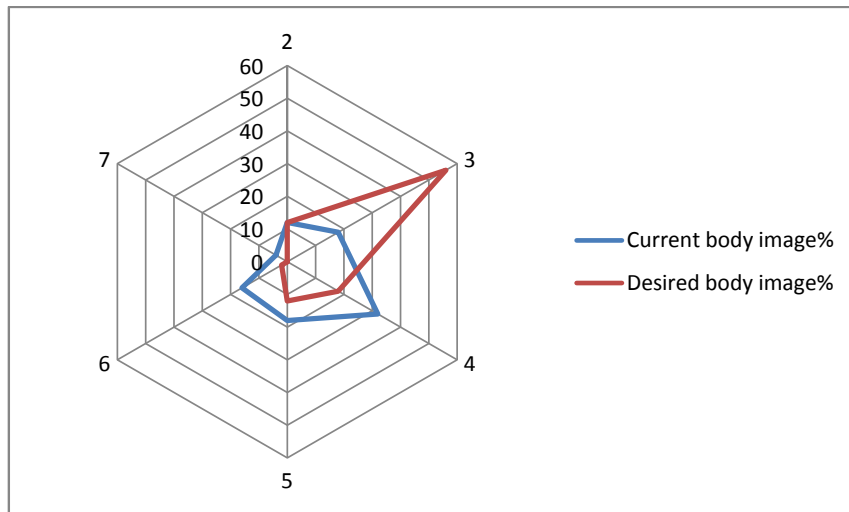


Figure2. Comparison of the current and desired body images of participants. Percentages of participants who defined their body images for each figure were given along vertical line. Figure numbers state the nine figures numbered 1 to 9 by developed Stunkard et al. There was no data for figures 1,8,9. The most desired body image was figure 3.

Discussion

A nutrient content claim is an FDA-regulated statement on food packages that characterizes the level of a nutrient in a food such as “free,” “high,” “low,” “more,” and “reduced” as followed the same way of nomination by Turkish authorities [13]. In general there has been confusion by consumers about the term of low calorie food. Since in Istanbul, Turkey, on the label of these types of foods are usually written as “light food”, in our questionnaire, we used “light foods” rather than “low calorie foods” or “reduced calorie foods”. It was reported that customers with high BMI values were more aware of light foods, and were checked more of the calorie value on labels

than the customers with the normal BMI levels [14,15]. In several researches, it was shown that overweight individuals tend to balance their weights with diet, and to buy light foods more often than the others did [16]. In our study, forty six percent of the consumers had the value of BMI over twenty five (overweight and obese). Most of the consumers (66%) described light product as low fat and low calorie food.

The differences between current body image and desired body image indicated that number “three” was the most desired figure but the current body image was highest for figure “four” indicating the dissatisfaction from their body images. To achieve their ideal body image, they usually modify their dietary behaviors subsidizing low calorie food with the normal ones [17]. In fact, according to a Calorie Control Council survey on dieting trends and habits, consumers frequently choose foods low in fat as a method of weight control [18]. In present study, only 30% of the participant seemed to satisfy with their body images (12%, figure 2 and 18%, figure 3), so we defined 70% of consumer desired leaner body images. However, one fourth of the participants declared that they use light foods when they were on diet. That may mean that being on a diet is not the only reason to consume light foods or they do not want to share real information. This issue can be a subject of forthcoming studies. The light food utilization among whole participants was 62%. This may be the number of consumer who got an action to lose weight consuming light foods. Although the perception of consumers indicated that consumption period and nutrient value of light foods were the main parameters, when they buy light foods, the biggest difference was health issue pointing a major confusion on whether light foods labels were healthy or not. In addition the number of consumers who declared light foods safe to use was lower than the consumers who turned this perception to buying habit. This might be the reason for a difficulty understanding the information provided by labels as shown in several studies [19,20].

Our study has several limitations. First is the small number of subjects for evaluating sub-groups such as age and sex to define potential differences. Second is the homogeneity; most of our population is at the ages of 18-24 years. Third is the reliability of body image self-consciousness. However, the size of our study gave an opportunity to evaluate the light food perception and consumption and to relate obtained data with body images. This pilot study also shed light on future queries related perception and consumption of any kind of food.

In sum, our study revealed that there is a relation between the BMI values and the consumption of light foods. Although the light food perception and consumption varied among participants, the biggest doubt was whether light foods are good or bad for health. The closest approach for perception and consumption was the description of low calorie and low fat foods for light foods. Light beverages were more preferable, but in general solid light foods were consumed more. The amount and nutritive value of light foods were the most effective parameters that affect their decision when they buy light products. The differences between current and desired body images emphasized that majority of studied population wanted to be leaner; that can be a driving force for light food consumption.

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