

A survey on weight reduction methods employed by obese

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ABSTRACT

The present study was undertaken to assess the methods of weight reduction adopted by obese individuals. A sample of one hundred people (BMI = 25 kg/m²) was selected and the relevant information was collected using structured interview schedule (i.e. general information, anthropometric measurements and details about weight reduction methods). Subjects on modified/ restricted diet (specially crash diet) as method of weight reduction were further asked about duration, source of motivation, weight loss and side effect. The findings of the study revealed that most of subjects (58 per cent) preferred a combination of physical exercise (walking) + dietary modification (low calorie diet) for weight reduction. The detail probing about crash diet indicated that most of subjects used 7 days crash diet and the average weight loss was 2.8 kg from these diet.

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Key Words : Obesity, Medication, Exercise, Weight loss, Crash diet

INTRODUCTION

Health is a dynamic life process, which begins at birth and is governed by genetic and environmental factors throughout life. Now a days, due to sedentary life styles and industrialization several health problems have crept into people's life among which obesity is dominating (Vijayalakshmi *et al.*, 2003). The prevalence of obesity is increasing in most parts of the world, not sparing any age and sex group. Moreover, obesity is no longer just a concern for developed countries, but it is becoming an increasing threat to many developing countries. Globally, there are more than 1 billion overweight adults, at least 300 million of them obese (WHO, 2010). The major health consequences associated with obesity are non – insulin dependent diabetes mellitus, cardiovascular diseases, gout, gall stones, renal diseases, osteoarthritis, psychological problems, mechanical disabilities and certain types of cancer. Now a days, fighting obesity has become one of the main public health concerns. The various communication media play a vital role in providing information on different methods of weight control. People get influenced by media and follow these different methods like medication, surgery, diet, exercise etc. Medication, surgeries are reported to create enormous side effects on health. Diet management coupled with exercise is one of the ways to provide a positive solution for the problem of obesity. The word diet is often used to describe an eating

plan intended to aid weight loss. However, diet really refers to the foods consumed by a person in the course of a day or week. There are many different types of diets for weight loss like low calorie diet, low fat diet, low carbohydrates diet, very low calorie diet, yo- yo diet, crash diet etc. There is intense debate about which methods are more used and are most effective for treating obesity. The dramatic increase in obesity worldwide remains challenging and underscores the urgent need to test the effectiveness and safety of several widely used weight loss diets.

Considering all these points, the present piece of research was undertaken to find out different methods of weight reduction employed by obese people.

METHODOLOGY

The methodology followed during the course of conduction of work has been explained under the following heads:

Subject selection:

A preliminary survey was conducted to find out different methods adopted by obese people to reduce their weight. For this purpose, subjects were contacted at gym, health clubs and morning walk places of Udaipur city. One hundred subjects were selected on the basis of their BMI (= 25 kg/m²) and willingness to participate in the study.

Data collection:

A structured interview schedule was developed in view of information to be collected for the study. The interview schedule consisted of the following sections:

General information:

This section included information about name, age, sex, family type, address, religion, education, occupation and food habits of the subjects.

Anthropometric measurement:

Height, weight, waist, hip measurements of the subjects were taken for calculating body mass index (BMI) and waist-hip ratio (WHR).

Information about weight reduction methods:

Subjects were asked about their adopted method of weight reduction like physical exercise (*i.e.* yoga, cycling, aerobic, walking, skipping and any other), dietary modification (*i.e.* short duration crash diet, low calorie, very low calorie, low fat, low carbohydrate diet and any other) medical treatment (drugs and operation) and combination of them.

The subjects following crash diet were further asked about duration, source of motivation, weight loss and side effect and the responses to obtained were recorded.

Data analysis:

Results were expressed as percentage and in mean \pm SD.

OBSERVATIONS AND ASSESSMENT

The results obtained from the present investigation as well as well as relevant discussion have been presented under following heads:

Anthropometric measurements:

Table 1 shows the mean values and standard deviation of anthropometric measurements of the subjects. The weight and height of the subjects ranged from 57.5 kg to 102 kg and 145 cm to 174 cm, respectively. The BMI and WHR of the subjects ranged from 25 kg/m² to 40.0 kg/m² and 0.79 to 1.0, respectively.

Table 1: Anthropometric measurements of the subjects

Sr. No.	Body measurements	Mean \pm SD
1.	Weight (kg)	71.1 \pm 8.6
2.	Height (cm)	157.6 \pm 17.1
3.	BMI (kg/m ²)	28.5 \pm 3.3
4.	WHR	0.83 \pm 0.05

Results revealed that all the subjects had BMI = 25 (obese) as per the classification given by WHO (2000) for Asia pacific region.

Information about weight reduction methods:

Table 2 exhibits data on the efforts made by the subjects for reducing their weight. It was found that 93 per cent subjects attempted weight reduction. Out of this greater percentage of subjects (58.06 per cent) used the combination of physical exercise and dietary modification. Slightly more than one-third of subjects have made efforts by adopting physical exercise alone and only few (2.15 per cent) of them have opted for medical treatment.

Table 2 : Distribution of the subjects on the basis of methods employed for weight reduction

Sr. No.	Method	Percentage (n=93)
1.	Physical exercise	39.78
2.	Dietary modification	0
3.	Medical treatment	2.15
4.	Physical exercise + Dietary modification	58.06
5.	Physical exercise + Dietary modification + Medical treatment	0

These findings are in alignment with those reported by Augustine *et al.* (2003) who while studying observed that dietary modification (42 per cent) was the most accepted method for weight loss plan followed by exercise (21 per cent) and diet pill (2 per cent).

Details of weight reduction methods:

Subjects when distributed on the basis of physical exercise performed by them (Table 3) it was found that a combination of exercises was mostly preferred way such as 26.8 per cent of them were doing cycling + walking + skipping followed by 7.52 per cent (aerobic + walking + cycling + yoga + skipping). A combination of 4 exercises was adopted by as little as 8.59 per cent. The greater participation of the study population in different form of exercises could be most probably due to the increased awareness of the subjects about the underlying health benefits of the exercise.

Similarly single exercise pattern was also noted in the subjects. As high as 18.27 per cent subjects opted walking followed by aerobic (8.6 per cent). Very few of the subjects reported cycling (4.3 per cent) as the only form of exercise.

These findings are in accordance with those of Talesara and Sankhla (2005) who reported that higher percentage (40 per cent) of the subjects adopted walking

Table 3 : Percentage distribution of subjects for physical exercise performed by them

Type of exercise	Percentage (n=91)
Yoga	1.07
Yoga + cycling + walking	3.22
Yoga + walking	2.15
Yoga + cycling +aerobic	2.15
Yoga+ cycling + aerobic + walking	4.30
Yoga + cycling + walking + skipping	3.22
Yoga + cycling + skipping	1.07
Cycling	4.30
Cycling + walking	2.15
Yoga + aerobic	2.15
Yoga +aerobic + walking	1.07
Cycling + aerobic	2.15
Cycling + aerobic + walking	3.22
Cycling + aerobic + walking + skipping	1.07
Cycling + aerobic + skipping	2.15
Cycling + walking + skipping	26.88
Aerobic	8.60
Walking	18.27
Aerobic + walking	3.22
Aerobic+ walking + cycling + yoga + skipping	7.52

as a form of exercise since it is the easiest, enjoyable of all other exercises and can be easily incorporated into one’s life style.

A sum total of 11 types of dietary modifications were observed in the study group. A glance at Table 4 exhibits that low calorie diet was adopted by majority of the subjects (38.88 per cent) whereas very few of them reported the intake of crash diet (9.25 per cent), low fat (3.7 per cent)

Table 4 : Percentage distribution of subjects for dietary modification performed by them

Sr. No.	Dietary modification	Percentage (n=54)
1.	Crash diet	9.25
2.	Low calorie diet	38.88
3.	Very low calorie diet	1.85
4.	Low fat diet	3.70
5.	Crash diet + low calorie diet	24.70
6.	Crash diet + low calorie diet + very low calorie diet	3.70
7.	Crash diet + low calorie diet + very low calorie diet + low fat diet	3.70
8.	Crash diet + low calorie diet + low fat diet	1.85
9.	Crash diet + low fat diet	5.55
10.	Crash diet + low fat diet + low carbohydrate	1.85
11.	Low calorie + low fat	5.55

and very low calorie diet (1.85 per cent). Diet in combination was taken by nearly half of subjects (46.9 per cent). The most acceptable dietary combination included low calorie diet with short span *i.e.* crash diet (24.7 per cent). Approximately 17 per cent of the subjects were consuming crash diet in combination of some other diet. Low calorie + low fat diet was consumed by a small fraction (5.55 per cent) of the study population.

Crash diet details:

When asked about the sources of motivation for crash diet, 42.8 per cent study population reported the source of motivation for using the crash diet was beneficiary of the diet. Equal numbers of subjects (8 each) were motivated by their friends and internet.

It was observed that 7 days duration was accepted by more than half (64.28 per cent) of the subjects and remaining 35.7 per cent subjects taken crash diet for more than 14 days to a maximum of 21 days. A direct association was observed for number of day’s crash diet taken and weight loss values, a highest value of 5.1 kg was seen in case of 21 days whereas a lowest value of 2.8 kg was seen for 7 days (Table 5).

Table 5 : Distribution of the subjects according to the duration and weight loss by crash diet

Duration of crash diet	Percentage (n=28)	Weight loss (kg) (Average value)
7 days	64.28	2.8
14 days	14.28	4.3
21 days	21.42	5.1

When the subjects were enquired about the side effects of crash diet (Table 6), it was found that three-fourth of them reported positively and out of them 32.14 and 21.42 per cent reported rapid weight gain (when off the diet) and weakness, respectively. A minor (17.85 per cent) portion of the subjects also reported a combination of the above mentioned two problems.

Table 6 : Distribution of the subjects on the basis of problems related to crash diet

Side effect	Percentage (n=28)
Rapid weight gain	32.14
Weakness	21.42
Rapid weight gain + weakness	17.85
Hair loss	3.57
No side effects	25

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