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A Study of a Correlation between Average Initial Recommended Amount of Weight Loss and Defined Expected Weight Loss in Pre-Menopausal Obese Indian Women

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Aims and objectives: This study was undertaken to determine the defined expected weight loss in pre-menopausal obese Indian women at their first visit to a weight loss clinic. It was also intended to compare this defined expected weight loss with the average initial weight loss recommended by the reputed stakeholders in the field of obesity research.

I. Introduction

The prevalence of chronic non communicable diseases such as diabetes mellitus, obesity, hypertension, ischemic heart disease is high, and the prevalence of premature deaths due to these diseases is also astounding (1). Obesity is the commonest chronic non communicable disease worldwide. Similar trends are observed in our country as well. With this tremendous rise in obesity prevalence, its understanding as a disease, its complications, and its treatment is evolving rapidly. currently, nutritional advice, exercise, psychological treatments, medications and in a few selected cases, surgery are considered as accepted modalities of management(2).Various types of psychological treatments are recommended. Behavioural therapy (bt), cognitive behavioural therapy (cbt) are some of the examples. Though important , psychological aspects in the management of obesity are often neglected. Goal setting is considered to be an important part of the psychological treatment of obesity. Major stakeholders in the field of obesity research have insisted that on an average majority of the obese patients can achieve and sustain a weight loss of about 5 to 10 percent of the original body weight. This amount of weight loss is also said to be beneficial for preventing and controlling cardiovascular risk factors.(3) We intended to study whether the pre-menopausal obese women in our sample had realistic weight loss expectations or not.

II. Patient Methods

Pre- menopausal obese women attending a weight loss clinic for the first time were selected for this study. The clinic is situated in Kolhapur city, Maharashtra state in India. BMI (body mass index) cutoffs to define obesity were adopted from the guidelines published elsewhere. (4) (5) Thus a body mass index of 25 kg / sq. meter was considered as a cut-off to define obesity. The participants were enrolled after carefully applying inclusion and exclusion criteria.

1) Inclusion Criteria

a) Pre-menopausal women were enrolled in this study.
b) Women who are educated at least till graduation were selected to maintain the homogeneity in the sample population.
c) Women from higher middle socioeconomic class were enrolled.

2) Exclusion Criteria

a) Women with any illness, such as cancer, hypothyroidism, which might interfere with weight, were excluded.
b) Women taking any medications which might lead to weight changes, such as diuretics, thyroid medications were excluded.
c) Women under any treatment for weight loss such as bariatric surgery, medications, any ongoing dietary treatment were excluded.

3) Study of anthropometric characteristics:

At the time of their first visit to the weight loss clinic, body weight was measured using Tanita human weighing scale with an accuracy of 100 gm. This was undertaken during follicular phase of their menstrual cycle, to prevent a bias due a particular phase of the cycle. This was their baseline body weight this weight was labeled as: wt-b. The height was measured to the nearest of millimeter using Tanita stadiometer. The method of recording weight is described elsewhere. (6) Body Mass Index (BMI) was calculated in each woman. This BMI was their baseline BMI it was labeled as: BMI–b.

4) Study of defined expected weight loss; each participant was required to write down her desired target weight. The concept of desired target weight is explained elsewhere (7) and is explained in short below, in the discussion. This was labeled as: wt-d defined expected weight loss was calculated as wt – b minus wt-d, and was labeled as d - loss similarly the amount of weight loss defining 10 percent weight loss was also calculated. This was labeled as: 10 – loss.

5) Calculations and statistics: The defined expected weight loss. (d-loss) was compared with 10 – loss, using appropriate statistical tests. The data was collected, analysed, and presented in appropriate manner.

III. Results

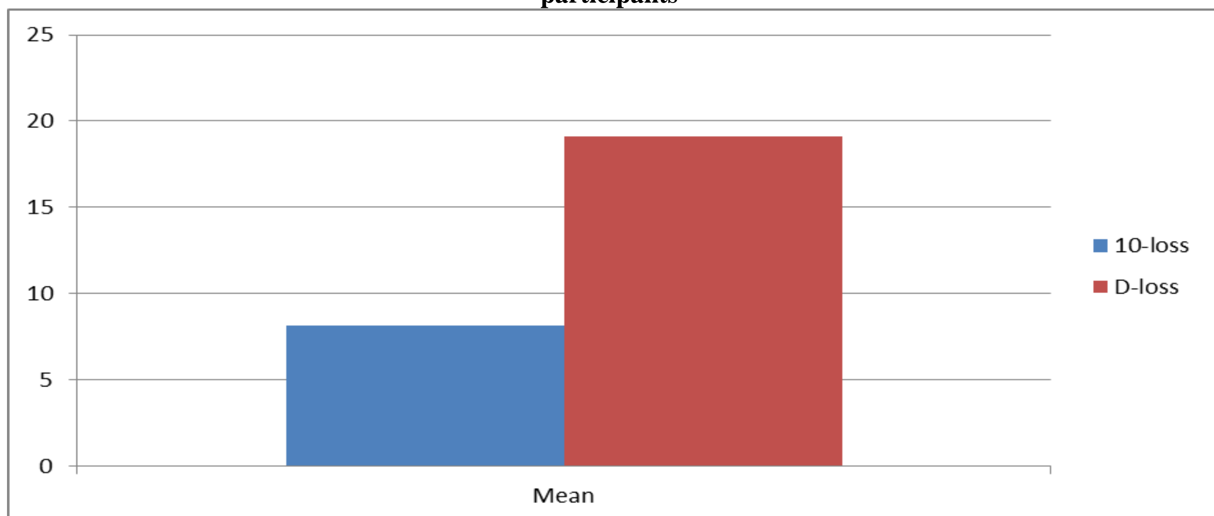
Table (1) table representing the demographics of the study participants.

Total number of participants	32
Average age	33.875 yrs.
Average bmi	32 kg/ sq meter.

Table (2) table showing mean, variance, t values of the study sample

	Mean	Variance	Df	T-value
10-loss	8.129	1.466	31	$3.3807368e\text{-}06^{ns}$
D-loss	19.113	158.245		

Figure 1: the bar diagram showing the mean weight for 10-loss and d-loss indicated by the study participants



IV. Discussion

As mentioned above, obesity is becoming a major health problem all over the world, including India. Knowledge about its anthropometrics, complications, management is evolving. Psychological modalities of treatment though neglected many a times, must form a major part of a multipronged approach to the management of obesity. Behavioral therapy (bt), cognitive behavioural therapy (cbt) are some examples of commonly used treatment modalities. Goal setting is an important part of psychological treatment of obesity. Many examples of goal setting, in the management of an obese patient can be provided. Deciding to start walking daily for 30 minutes in an otherwise sedentary patient can be an example of goal setting. Similarly, determining and setting a weight loss goal is another important example of goal setting, and is considered to be an important aspect in the management of an obese patient. This is usually explained and discussed with the patient under a format of dream weight, desirable weight and accepted weight, that a patient envisions to achieve as a result of the treatment its details are described elsewhere(7). In short, the dream weight is the weight patient dreams to achieve. As the name suggests, it is usually the dream for the patient. The patient knows that such a low weight may not be achievable. The desirable weight is one which patient will be happy to achieve as a result of the treatment under an expert care. While the accepted weight is the one which the patient thinks is the achievement, below which the treatment is perceived to be a failure. In other words dream weight is associated with the highest envisioned weight loss, while desirable weight is associated with an intermediate envisioned weight loss while accepted weight is associated with the least possible envisioned weight loss. In this study it was intended to determine defined expected weight loss in the study population. It was the desirable

weight loss, as stated by the patients and it was intended to compare this defined expected weight loss with a weight loss equivalent to 10 percent of the baseline body weight, which is recommended by major stakeholders in the obesity research, as a possibly useful and sustainable weight loss. It is expected to provide an insight into whether obese pre- menopausal Indian women, who consult a specialist for their weight problem, carry any unrealistic weight loss expectations. This study is important considering that unrealistic weight loss expectations can form a basis for predictable treatment failure. This is expected to provide help to the clinicians while managing obese patients. From our study it is clear that, premenopausal obese Indian women do not carry unrealistic weight loss expectations, which are not far different than the 10 perecent recommended weight loss which is considered both an achievable and sustainable target. Our studies are not in agreement with that of (8) which was carried out in obese women, at a different place. We believe that similar studies be conducted in a larger population, different populations such as menopausal Indian women, men, pediatric populations. Similar studies using certain other anthropometric parameters such as desired Body Mass Index (BMI) instead of desired weight might provide additional insight.

V. Conclusions

Obese premenopausal Indian women in our sample do not carry unrealistic weight loss expectations. Unrealistic weight loss expectations can be one of the major causes of treatment failure. This might prove to be useful for Indian health caregivers.

Study details : Usually in a weight management program, the patient has specific and individually set goals about how much weight must be lost. It is also very well known that an unrealistic goal setting can be one of the major reasons why treatment may fail in such patients. We selected premenopausal obese Indian women attending a weight management clinic for the first time; they were studied to know whether they set unralistic goals. Tehir weight loss expectations were compared with the initial weight loss goals recommended by reputed stakeholders such as the WHO (World Health Organization). This was done using appropriates statistical methods to the collected data the defined expected weight loss in young obese Indian women is not significantly higher than the recommended initial weight loss. Similar studies must be carried out in larger population and in different populations such as menopausal women, men, pediatric obese patients.

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