



BEAUTY BODY (BODY COMPOSITION) AMONG FAT LOSS PROGRAM PARTICIPANTS A CASE STUDY LONGITUDINAL PRIMARY STUDY

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ABSTRACT:

Overweight and obesity can be risk factors for various diseases. The increasing prevalence of overweight and obesity is a public health problem and a challenge that needs to be addressed urgently. The purpose of this study is to periodically monitor body beauty (body composition) in clients running a fat loss program package. This type of research is a case study with a longitudinal design. The subjects in this study were clients who followed the fat loss program of 4 people who followed the program in June 2023 as determined by all subjects who followed the program in June 2023. Test instruments using meters and a Bioelectrical Impedance Analyzer (BIA-Omron) Data analysis using descriptive analysis of changes in body beauty indicators (body composition). The results show that: the fat loss program gives a decreased change in fat percentage before and after the program also reduces weight as well as increases muscle percentage thus giving a more proportional beautiful body appearance. Based on the results, it can be concluded that the fat loss program descriptively gives good results for the improvement of body composition and fat percentage and weight loss.

Keywords: Fatloss program, fat percentage, weight, overweight, body beauty, body composition

INTRODUCTION

In the last decade, the prevalence of obesity worldwide has increased drastically, and should not be considered just a consequence of unhealthy lifestyles, but obesity should be considered a disease and a risk factor for other diseases (Helmyati et al., 2022) let alone the presence of COVID 19 will add to the situation that is worsening the condition (Oshakbayev et al., 2022). The early category of obesity called overweight is a risk factor for a variety of diseases, the only one being fatty liver disease (Liu et al., 2022). Individuals who are obese are more likely to develop diabetes than individuals who are not obese or overweight (Gupta & Bansal, 2020). Based on research Teresa et al. (2018) showed that being overweight or having a high percentage of fat influences how to measure a person's VO2 Max level. Moreover, globally, being overweight has a considerable impact on social costs, seen from the cost of health care as well as costs associated with loss of productivity (Gupta & Bansal, 2020). Obesity or overweight is also a risk factor for gastrointestinal disorders (GI), inflammatory bowel disease (IBD), pancreatitis, and GI cancer (Emerenziani et al., 2019). The prevalence of overweight Indonesians shows an increase in data every year, and the increase in the prevalence of women is higher than that of men. One factor that increases overweight is the presence of a "Gaul" diet such as the consumption of junk foods that are nowadays commonly found in addition to

the emotional need for food compared to the consumption of nutrients in foods as well as the lack of physical activity (Banjarnahor et al., 2022), (Fauziyah & Santosa, 2022)

Being overweight is increasing worldwide including in Indonesia, overweight in primary care should be given the negative impact of being overweight. It is also known that overweight consistently increases in women and decreases in men as they age (Otitoola et al., 2021). Overweight and obesity are ranked fifth in the global risk of death (Permatasari et al., 2022).

Obesity and overweight require special attention that needs to be addressed immediately. One way to overcome being overweight is to undertake a healthy fat-loss program that consists of three components: right supplements, right a diet, and also right exercising.

Dietary adjustment is a behavior or habit in which eating behavior is a person's response to food as a vital necessity for life. This behavior includes knowledge, perceptions, attitudes, and practices toward food and the elements contained therein (Ajzen & Fishbein, 2005). Including describing behavior related to dietary frequency, dietary patterns, eating preferences, and dietary choices. Eating behavior is a modifiable eating habit and is believed to be a powerful predictor of the occurrence of overweight in adolescents (Hoare & Cosgrove, 1998). One of the causes of the rise in body fat composition is fast / junk food (Hoare & Cosgrove, 1998) and also

over-eating which contains a lot of energy in foods (Samodra et al., 2023).

Practical exercise arrangements can be done on a day-to-day basis or become a pattern of physical activity such as weight training with a dumbbell as a multi-component for individuals undergoing calorie-restrictive interventions, potentially reducing the risk of cardiovascular disease and weight loss.

The combination of resistance training and aerobic training can produce greater effects of its benefits (Kargarfard et al.; 2017, Lopez et al.; 2022) A practical form of aerobic exercise is jogging or aerobic exercise (Muharramah et al., 2019). 30-minute jogging methods can reduce body fat percentage in people with obesity and weight loss (Arifin et al., 2022) (Prakoso, 2022), (P. Purwanto & Nasrulloh, 2017). In addition, aerobic exercise can also increase VO2 Max (Hasibuan et al., 2021).

Supplement support used in the TWS fat loss program includes jumpstart, control, complex, trim shake, and lifepack. The model of implementation of this fat loss program is to change the mindset or behavior for 90 days that has been proven that behavior change takes 90 days. How the sequence of activities follows the rhythm of daily life (habitual pattern) from waking up to the night before going to bed

In assessing the success of the fat loss program based on changes in the metabolism, the visceral fat layer, the body fat percentage, percentage of muscle, body mass index (BMI): and Basal Metabolism Rate (BMR), weight and anthropometry

especially of the thigh circle, upper arm, and abdominal circle, hips. This article will study Beauty Body (Body Composition) on the participants of a fat loss program a case study longitudinal

RESEARCH METHODS

The research was carried out as a stage of initial study of four cases of participants of the fat loss program during June, July 2023. This will be followed by a longitudinal design for 90 days with a periodic evaluation of 10 days. At this stage, the evaluation is also carried out for 10 days once by weighing body composition indicators namely body fat percentage equal to muscle percentage, Body Mass Index (BMI): and Basal Metabolism Rate (BMR), as well as visceral fat coating weight with a fairly reliable Bioelectrical Impedance Analyzer (BIA-Omron) scale (Julien Verney et al, 2015) The BIA measurements are carried out by attaching a pair of electrodes to the wrist/ hold hand and the ankle/ plate at sole, so that weak electric current (800 mAmp) can pass through the body. Although measurements can be done at any frequency, 50 kHz has become the standard for commercial instruments. BIA-Omron said valid significant monitor correlated with BOD POD when assessing body fat, $r=0.95$.and said reliable because it was used wherever and whenever the results remained the same. Measuring with meters for anthropometry especially thigh circle, upper arm and the circumference of the abdomen, and the hips.



The fat loss program consists of 1) a diet management program with the principle of energy restriction, balanced nutrition, and diet 2) a pattern of exercise or a habit of exercising every day for 10-30 minutes according to initial preference, the form of exercise used includes jogging, aerobic resistance training is circuit weight training with dumbbells (A. Purwanto, 2020) (Husnul, 2023) (Prakoso, 2022). 3) the pattern of taking 5 types of supplements, namely a) Jumpstart functions to help increase normal metabolism, support muscle mass, and control appetite. , b) Control; functions to help control appetite, reduce food cravings, and support positive mood and mindset c) Complex to restore healthy metabolism and maintain lean muscle d) Trim shake as a meal replacement with a source of high-quality protein needed by muscles and helps reduce food cravings and also helps feel full longer. e) and Life pack are nutrients with optimal levels of micronutrients. It has a comprehensive content of antioxidants, vitamins, and minerals that are usually not sufficient only for food. This supplement also supports heart and blood vessel health, supports

blood-sugar metabolism, complete bone nutrition, and other anti-aging benefits.

The data analysis was done by looking discreetly at the changes in all the indicators from the start of the program, day 10 (every 10 dyas evaluation) Whether there's a change in each indicator, the change can be better or decrease. Besides, there are interviews about satisfaction, feelings on the physical and psychic when there are complaints.

RESULTS AND DISCUSSION

Data analysis can be descriptive looking at height and age and body composition. As for the average height of 150 cm, only one person is 165 cm tall and his age is two cases of 17-year-olds and two cases of 69 and 72 years old. Some indicators are the percentage of fat and muscle, as well as the visceral fat layer, body weight, BMI and metabolism as well as anthropometry of the thighs, arms, and abdomen. Of the four cases, two cases have been evaluated four times, including before the start of the program because they have followed the program since the beginning of June where the evaluation is done every 10 days. Two new cases can be evaluated twice, including before the program starts. In all cases at the first evaluation, there was generally a decrease in fat percentage, BMI, and weight. The visceral fat is somewhat difficult to reduce and most difficult to raise the percentage of muscle because of the unusual case of doing physical exercises with loads to build the muscle. Therefore, the first

15 days were supported by the Jumpstart supplement to improve the mood so that the spirit changed his habits or patterns of waking up, breakfast, and eating. In all cases, changes in body fat percentage like to go back up because in the normal or usual common diet is still afraid to eat with normal portions so they feel hungry. Another problem is that cases 1, and 2 still have difficulty sleeping due to age, so consultants

daily or periodically do regular counseling. Difficulty or lack of sleep and hunger suppression because of the understanding that diet is still the concept of reducing food or hunger both of these things that make the percentage of fat and muscles not quickly improve.

Table cases :

Case 1. Age 72 years Height : 150 cm

Indicator	before	I	II	III
weight/ (kg)	59	57.6	56.9	56
BMI	26.6	25.6	25.3	24.9
VFA (%)	10.5	9.5	9	9
Body Fat (%)	38	37.3	36.0	35.6
Body Fat (kg)	22.34		21.48	20.45
Body age	74	73	72	71
Muscle Mass (%)		21.70	21.4	22
Upper arm (15 cm from elbow)	31.5	30	30	31
Above waist	85.7	82.5	80	80
Waist (Beely Button)	88.5	86.5	84	83.5
Abdomen (5 cm)below waist	96.5	93	93	92
HIP (10 cm)	95	94	92.5	92
Tight 15 cm aobve knee	49	45	44.5	44.5
metabolism (BMR)	1232	1197	1193	1180

Case 2. Age 69 years Hight 151 Cm

Indincators	Before	I
Weight (kg)	54.9	51.9
BMI	24.1	22.8
VFA (%)	7.5	6.5
Body Fat (%)	34.80	35
Body Fat (kg)	19.08	18.16
Body age	68	66

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Muscle Mass (%)	27.50	21.91
Upper arm (15 cm) from elbow	26	25.7
Above waist	83.5	76.7
Waist (Beely Button)	92.3	86.1
Abdomen (5 cm below waist)	97.3	91.7
HIP (10 cm)	95	89
Tight (15 cm)above knee	47	41
metabolism (BMR)	1168	1120

CASE 3. Age : 17 years Hight 150 cm

Indicator	Before	I	II	III
weight (kg)	70.2	69.5	68.8	69.2
BMI	31.2	30.9	30.8	30.8
VFA (%)				
Body Fat (%)	35.60	34.90	36.20	35.90
Body Fat (kg)	24.90	23.90	24.9	24.8
Body age				
Muscle Mass (%)	22.90	22.00	22.3	22.5
Upper arm (15 cm from elbow)	31	39	30	30.5
Above waist	83.5	85.6	86.5	82
Waist (Beely Button)	89.8	87.8	90.5	85
Abdomen (5 cm below waist)	99.7	92.1	95	92
HIP (10 cm)	101	98.5	95	98.2
Tight (15 cm aobve knee	48.5	48	47.5	47.2
metabolism (BMR)	1398	1381	1371	1379

CASE 4. Age 17 years Height 165 cm

Indicator	before	I
weight/ berat (kg)	91.6	88.5
BMI	33.6	32.5
VFA (%)	12.5	12
Body Fat (%)	38.50%	38.80%
Body Fat (kg)	35.7	34.25
Body age	49	48
Muscle Mass (%)	13.60	23
Muscle Mass (otot (Kg)	21.62	20.53

Upper arm (15 cm from elbow	33.5	31.5
Above waist	88.7	87
Waist (Beely Button)	87	84
Abdomen (5 cm below waist	110.5	105.5
HIP / Pinggul (10 cm)	109	109
Tight (15 cm above knee	56.3	54
metabolism (BMR)	1713	1863

In this cases, a study of the beauty body (body composition) can be seen as a subjective assessment of the beauty and aesthetics of a person's body, or as the composition of a person's body in terms of the percentage of fat, muscle, water, and bones. Beauty body can vary in each culture and can be influenced by personal preferences as well as existing standards of beauty. Normally, the beauty body emphasizes more on balanced body proportions, healthy skin, and visually attractive appearances. The body measurement process uses bioelectric impedance to determine the percentage of body fat, muscle mass, and other components to evaluate a person's health and fitness.

The body fat percentage can be influenced by two main factors: calorie consumption and energy expenditure, calorie consumption that is not balanced with energy expenditure can increase body fat percentage. (Tendean et al., 2018).

In such cases BMI measurements can see that one case shows obesity because BMI can be categorized into thin, normal, overweight, and obesity categories. (Mahfud et al., 2020, Dhara & Chatterjee, 2015, Budi et al., 2020). BMI can be used to look at one

of the manifestations caused by overnutrition and increase the risk of cardiovascular disease because it has a connection with metabolic syndrome characterized by, glucose intolerance, dyslipidemia, hypertension, and others (Kaparang et al., 2022).

In one case, the percentage of visceral fat hasn't been seen since the device hasn't been able to detect it because it's under 17 years old. Visceral fat in two cases decreased as there was an exercise in line with the results of systematic research showing that the aerobic component of the exercise program is vital for reducing visceral fat in addition to strengthening exercise (Ismail et al., 2012).

Overall, there was a decrease in body fat percentage due to the fat loss program and there was also a package of aerobic resistance training such as circuit weight training with dumbbell effectively. (Nurhadi et al., 2022) (Marito, n.d.).

Weight loss occurs in all cases according to the study Body weight training is one type of resistance training without using tools but using body weight with a circuit method also affects weight loss (Aryon et al., 2020 (Arief et al; 2021, Muharramah et al.; 2019, Bakri; 2020, Asian Journal of Engineering, Social and Health

Ramdhanni et al. 2020) in line with research carried out by Hita (2020) which suggests that aerobic and anaerobic exercise have interactions in reducing overweight rates.

Some studies show that supplements that contain protein, creatine, and green tea are great for improving muscle and fat loss especially creatine can improve strength and endurance while green tea can boost metabolism and fat loss

Subjectively based on the fourth interview, the four cases felt satisfied and felt lighter to be active, some experienced stomach felt full or swelling and hypertension in two cases over the age of 60 felt less or reduced

This longitudinal case study research is still needed in the extension of its observation with samples according to the calculation of the longitudinal study sample, the analysis does not include comparing or relationship between objective result and subjective complaints of the case of satisfaction, and a sense of comfort .

CONCLUSION

Conclusions of case studies show a decrease in body fat presentation and layer of visceral fat and an increase in muscle percentage due to aerobic and dumbbell exercises as well as weight loss in cases.

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