

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.

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 (Setyowati, Sudargo, & Menarianti, 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. (Bansal et al., 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 (Hecker et al.; 2022) 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 (Ashari et al., 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, Oldewage-Theron, & Egal, 2021). Overweight and obesity are ranked fifth in the global risk of death. (Halawa, Sudargo, & Siswati, 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 (Lidiawati, Lumongga, & Anto, 2020). 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. (Thaif, Supiati, & Kostania, 2014). One of the causes of the rise in body fat composition is fast / junk food (Worigi, Maach, Hafid, Hegazy, & Van Mierlo, 2019) and also over-eating which contains a lot of energy in foods. (Tamamilang, Kandou, & Nelwan, 2019), (Riagustin & Pontang, 2019).

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.

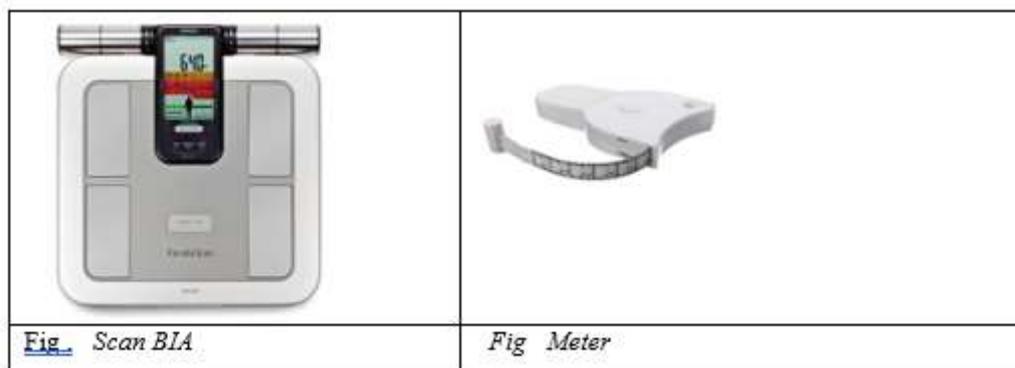
The combination of resistance training and aerobic training can produce greater effects of its benefits (Kargarfard, Shariat, Shaw, Haddadi, & Shaw, 2017), (Gayoso et al., 2022) A practical form of aerobic exercise is jogging or aerobic exercise. (Muharramah, Budi, & Astra, 2019), (Marbun & Hutapea, 2022). 30-minute jogging methods can reduce body fat percentage in people with obesity and weight loss (Darmawan et al., 2022, Prakoso, 2022, Purwanto & Nasrulloh, 2019),). 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 (Purwanto & Nasrulloh, 2019, Darmawan et al., 2022 Prakoso, 2022, Lestari & Nasrulloh, 2018) 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.

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	19.94
Body age	74	73	72	71
Muscle Mass (%)	21.70	21.4	22	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
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 aobve 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 impedence 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 (I. Ismail¹, et al; 2011)

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, Maesaroh et al; 2022).

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, 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 .

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.

RESULTS AND DISCUSSION

Turnover is the phenomenon of an employee's exit from an organization where they work. Although turnover can have a positive impact in some situations, in general, turnover tends to be detrimental to the organization. The organization will suffer a loss if the employees who leave are those who have high experience, superior abilities, and occupy important positions in the organization. On the other hand, if the employee who leaves has a position that is less strategic or not very influential, the organization can be considered lucky because the position can be filled by other employees who are ready to be promoted. However, in many cases, the change in the organization has a negative impact. Losing experienced and competent employees can lead to loss of valuable knowledge and skills, which can have an impact on decreasing productivity and quality of work. In addition, turnover can also lead to additional costs for recruiting and training new employees, as well as disrupting the stability and continuity of the organization's operations. Therefore, management needs to pay attention and manage turnover well to minimize its negative impact on the organization (Harahap et al, 2016).

The turnover rate of human resources at RSIA Restu Bunda during the 2022-2023 period is one of the critical indicators in measuring workforce stability and employee

retention in hospitals. In an effort to gain a thorough understanding, this analysis will be divided into two parts, namely the overall turnover rate and the turnover rate per section or department.

1. Overall Turnover Rate

During the 2022-2023 period, the number of employees leaving RSIA Restu Bunda was 30 people, while the number of employees at the beginning of the period was 150 people. Therefore, the overall turnover rate during the period is $(30/150) \times 100\% = 20\%$. That is, in that period, RSIA Restu Bunda experienced a turnover rate of 20%.

2. Turnover Rate Per Section or Department

In analyzing the turnover rate per section or department, researchers focus on the service, administration, and medical personnel.

a. Service Section:

In the service section, the turnover rate over a certain period is 15%. This shows a better level of stability compared to the whole hospital.

b. Administration Department

The turnover rate in the administrative department is 25%, which indicates a problem in the retention of employees in this section. It is necessary to conduct a more in-depth analysis to identify the cause of the high turnover rate.

c. Medical Personnel:

The turnover rate in medical personnel including doctors and nurses is 18%. Although better than the overall level, measures still need to be taken to maintain the stability and retention of medical personnel which is very important for hospital operations.

The HR turnover rate at RSIA Restu Bunda during 2022-2023 is 20%. Although there are sections that show lower turnover rates, some parts such as the administrative part still face problems in employee retention. Management needs to carry out specific strategies and actions to increase employee retention, especially in parts with high turnover rates. This will help RSIA Restu Bunda maintain workforce stability, improve service quality, and achieve expected long-term goals. The factors driving HR turnover identified include dissatisfaction with public facilities, which includes the work environment, physical condition of the office, and other facilities that affect employee comfort and productivity (Andriani et al, 2021). Dissatisfaction with public facilities can cause employees to feel uncomfortable and less motivated to stay at the company. Institutional social dissatisfaction and well-being in terms of income, which relates to the level of salary and well-being of employees in the company. If employees feel that their salary and well-being are not proportional to the responsibilities and contributions provided, they may be inclined to seek out other job opportunities that offer better compensation. In addition, ease of access to obtain basic daily needs, such as transportation, housing, and other facilities around the workplace. If employees are facing difficulties in meeting their basic needs, this can be an impetus to find work in a more accessible location.

Relationships with superiors, where poor relationships between employees and superiors can lead to dissatisfaction and tension in the workplace. If employees feel undervalued or don't get support from their boss, they may tend to look for

opportunities to work in a more positive environment. Other factors such as lack of career development opportunities, company policies that do not match employee expectations, and vagueness regarding career prospects in the company can also be a driver for looking for a new job. The impact of high HR turnover can have a negative impact on the operations and performance of RSIA Restu Bunda, including:

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Employee Replacement Cost

High HR turnover causes companies to have to spend significant costs to recruit and train new employees. The recruitment and training process requires a lot of human and financial resources, so as to increase the company's operational costs.

Decreased Productivity

Losing experienced and trained employees can lead to decreased productivity in hospitals. New employees may need time to adapt to their duties and responsibilities, which can affect the efficiency and quality of services provided.

Changes in Work Dynamics

High HR turnover can cause changes in work dynamics at RSIA Restu Bunda. Changes in team work and responsibilities can create operational instability and disrupt collaboration between teams.

Loss of Knowledge and Experience

Experienced employees who leave the company bring away valuable knowledge and experience. This loss of knowledge can affect a hospital's ability to meet challenges and cope with emerging problems.

Declining Service Quality

High turnover of human resources can lead to changes in the quality of services provided to patients. New employees may not be fully trained or have enough experience to provide services to the same standards as experienced employees.

In an effort to overcome the negative impact of HR change, RSIA Restu needs to implement several strategies that focus on increasing employee satisfaction and creating a positive work environment. Here are some strategies that can be taken:

Increased Employee Satisfaction

Companies need to conduct regular employee satisfaction surveys to determine the level of satisfaction and input from employees. Based on the survey results, RSIA Restu Bunda can identify problems that affect employee satisfaction and take action to correct them.

Career Development and Training

RSIA Restu Bunda can provide career development and training programs for employees to improve their skills and competencies. With the opportunity to

develop themselves, employees will feel valued and have the opportunity to grow in their careers.

Improved Communication and Openness

RSIA management needs to create an open work environment and communicate effectively with employees. Openness in sharing information about the company, policies, and procedures can increase employee trust and sense of engagement.

Improvement of Employee Policies and Programs

RSIA Restu Bunda can evaluate existing employee policies and programs, including payroll systems, benefits, and welfare programs. Companies need to ensure that these policies are fair and competitive so as to attract and retain qualified employees.

Recognition and Awards

Recognizing and rewarding employees' achievements and contributions is an important step to increase motivation and a sense of motivation. RSIA Restu Bunda can give public appreciation or provide awards in the form of incentives for outstanding employees.

Understanding of Employee Needs

RSIA management needs to understand and respect the individual needs of each employee. By understanding the needs and aspirations of employees, companies can create a work environment that supports their development and well-being.

Implementing these strategies, RSIA Restu Bunda can reduce the rate of HR turnover, increase employee retention, and create a productive and harmonious work environment. This will have a positive impact on the overall operation and performance of the hospital. RSIA Restu Bunda can make various efforts to retain employees who have the potential to experience turnover and increase retention rates. Some of the efforts that can be done include:

Career Development Program

RSIA Restu Bunda can provide clear and structured career development programs for employees who show potential and achievement. These programs can be training, certifications, or opportunities to get promoted, so employees feel valued and have the opportunity to grow in their careers.

1. Competitive Compensation and Benefits

Providing competitive compensation and benefits will help RSIA attract and retain qualified employees. Efforts to provide salaries that match the performance and contribution of employees will increase their satisfaction and motivation.

Employee Welfare Program

RSIA Restu Bunda can provide welfare programs for employees, such as health insurance, pension benefits, or other health and welfare programs. This program will help improve the quality of life of employees and provide a sense of security and comfort at work.

Open Communication

Ensuring open communication between management and employees is critical to understanding and addressing issues that may be affecting retention rates. RSIA

Restu Bunda can hold regular meetings with employees, provide a means to convey input, and listen to their aspirations and needs.

The implementation of these efforts can create a work environment that values and supports employees at RSIA Restu Bunda, so that employees have the potential to stay and contribute in the long run. Good employee retention will help the hospital retain qualified and experienced human resources, which in turn will have a positive impact on overall hospital performance and operations.

CONCLUSION

Based on the results of the study, it shows that five factors driving HR change, namely dissatisfaction with public facilities, social institutions, welfare in terms of income, ease of access to obtain basic daily needs, and relationships with superiors, provide valuable insights for human resource management. By understanding these factors, HR management strategies can be focused on efforts to reduce unwanted turnover of inventions. One important aspect of HR management strategy is improving employee welfare and satisfaction. Companies must invest in adequate facilities and ensure competitive revenue and institutional packages for employees. In addition, companies can assist employees in meeting basic daily needs, such as accommodating housing and transportation needs. In addition, creating a positive work environment and supporting good relationships with superiors is also crucial in influencing employees' decisions to stay at the company. HR management can also play an active role in reducing turnover by strengthening several key functions. First, an effective recruitment system helps get employees who match the company's values and needs. Second, employee training and development programs help improve their skills and competencies, increase confidence in work, and strengthen loyalty to the company. Third, HR management must ensure fairness in compensation and benefits offered, so that employees feel valued for their contributions. Fourth, providing career opportunities and promotions based on merit will motivate employees to stay and contribute better. Lastly, transparent and fair performance awards and appraisals provide recognition for employees' hard work and give them additional motivation to stay productive and dedicated. By combining these approaches, companies can create a work environment that minimizes HR turnover and ensures sustainability and better business growth.

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