

Introduction to Physiology BMHP5003

BSc Health and Social Care

Student Name: Rafaela-Andreea Veletean

Student ID: 1916795

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1. Introduction

Obesity refers to the body weight of the individual when it goes above normal. It is a disease that could result in huge damage to the individual body. Individuals with acute obesity have a higher chance of having several other diseases. The obesity diagnosis is generally dependent on BMI or body mass index evaluated as the weight of the human body in kgs fractioned by that particular individual's height (MacKintosh, et. al., 2019). The normal body mass index is considered to be between 18.5 and 24.9, body mass index of about 25 to 29.9 is considered as overweight and mass body index of 30 is often considered as obese. Body mass index is the worldwide measure of body mass integrated both linear mass and tissues of a human. Obesity can cause cancer, diabetes, heart-related diseases, hypertension, respiratory orders, and so on. Obesity has complex treatment and a greater rate of relapse (MacKintosh, et. al., 2019).

The major focus of the treatment for obese individuals must be to maintain and obtain a healthy weight despite the ideal weight. The possibility of long-interval successful weight loss is raised if the clinical experts or doctors coordinated with the professional expertise, for example, psychologists, health trainers, and dietician. This health assessment report aims to introduce a case study based on a health and lifestyle questionnaire. The objective includes analyzing the normal and abnormal conditions of physiology in an individual depends on the findings of the health assessment based on the assessment of patient A. The recommendation will be made for maintaining a healthy lifestyle on regular basis. At last, the conclusion will be made by summarizing the major findings of this report.

2. Case Study

3. Patient name is A, born 1/1/1973, she smokes and smoke 10-19 cigarette a day, she has high blood pressure, no heart attack or stroke, patient father had heart attack at age of 68. Her sister has high cholesterol. Patient BP is 180/90, height is 165 weight 86kg. She doesn't have time for exercise at all, she eats meat, regular chips and fries daily. She drinks alcohol between 3 and 6 unite a day

4. Health Assessment

4.1. Physiology and obesity

Abnormal psychology aims conditions at the patterns of behaviour, thought, emotion which could be signs of the psychological condition of health. Despite the difference between abnormal and normal psychologists. Physiology focuses on the study of living organisms' functions involving humans and could be examined at the stages of tissues, organ systems, cells, and overall animal/human body. As per the GDPR Act, 2018 and Data Protection Act, 1998, the individual participated in the health and lifestyle questionnaire is patient A. It has been analysed that Patient A hasn't involve any physical activity in their regular life and is fond of consuming alcohol of quantity 3-6 unit and smoking at least 10-12 cigarettes in each day. Also, the patient has the problem of higher BP and observed with the blood pressure of 180/90 with the weight of about 86 kilograms and height 165 cm. Patient A clearly stated that she has no time for exercise and she is eating meats, chickens, chips and fried-food items as their regular food. Patient A has also stated that her father's bad medical event (heart attack) is one of the reasons of her stress. It offers a deep understanding of the normal function of the body, by enabling highly efficient treatment for abnormal phases of diseases. The dynamic study of the working of the human body is known as Physiology. It demonstrates the physics and chemistry over basic functions of the human body, through the molecular behavior in the cells to organ system working in coordination. For centuries, physiology has been deeply coordinated with the medical. For several clinical-based scientists, physiology is the character of a particular human organ, for example, the gastrointestinal system, and cardiovascular. For other scientists, Physiology may aim at the cellular standards which are basic to the characters of every tissue and organ (Evers, et. al., 2017). Physiology assists in analyzing various day-to-day occurrences in the human body and the area of concern when an individual gets sick.

In the cardiac system, changes happen as the limitation of the adaption of the cardiovascular to the excessive mass of the body and raised demands of metabolic. Excessive mass of the body needs to rise in the degree of intravascular blood and at the same time rise in the cardiac result. The rise in the degree of stroke results in rising in left ventricular load, hypertrophy, and dilation which is already known as a failure of the heart. Coronary artery disease with obese individuals involves dyslipidemia, inflammation, and another critical state.

Obesity is linked with greater morbidity of asthma and with greater rate of prevalence and association of incidence rates has been continuously observed in women and men over various religions, races, etc and every group of age (Carpaij & van den Berge, 2018).

4.2. Causes of obesity

Obesity is caused due to consumption of a huge number of calories, especially food containing an excessive number of sugars and unhealthy fat, then an individual burns that extra fat by physical exercises or activities. Excessive energy is reserved through the body in the form of fat. Obesity is the most basic issue worldwide because the reason as various individual modern standards of living include consuming street and junk food of lower-cost, spending a large part of the day lying at a bed and being lazy.

Bad diet- Obesity is not an issue that happens in just one night or a couple of days. A bad diet and bad lifestyle of an individual could lead to obesity. Consumption of alcohol, eating a lot of junk and processed food, consuming unhealthy beverages or drinks which are having additive sugars and preservatives, eating excessively and so on (MacKintosh, et. al., 2019).

Lack of doing exercises- Exercise and physical activities involving any kind of sport have a major role in any individual's healthy life. But some so many people don't involve any kind of physical activity or exercise in their daily life who are at the same time eating unhealthy drinks and food could result in gaining extra weight and obesity.

Calories- The degree of energy of food is counted in units are known as calories. The average of 2500 calories per day is significant to the individual for maintaining a healthy weight. Individuals are ended up storing extra calories in the form of fat because they are not doing physical exercises.

In several cases, genes are the reason for causing obesity in people.

4.3. Interventions for obesity

Basic treatments for patients with obesity involve losing weight by adopting healthy diet plans, physical activeness, and other good habitual activities. Weight-based management programs might assist individuals in losing weight or gaining lost mass. Several individuals having obesity are not able to lose appropriate weight for improving their physical health. In these cases, a physician may recommend adding different treatments involving weight-loss devices, medicines, and bariatric surgery. Physicians suggested losing about 10-15% of individuals' body weight in the initial half-year of weight-loss treatment.

Bariatric surgery involves the various types of functionalities that assist in losing individual weight by making changes to the individual's digestion system. It is the option for individuals with the extreme point of obesity (MacKintosh, et. al., 2019).

Special diets based on fasting and calorie-limited food plans are also available options for obese individuals.

Weight-loss devices involving the gastric emptying device, electric-simulation device, and gastric balloon device are recommended by doctors for losing weight.

Medicines are also recommended by doctors when eating a healthy diet and exercising regularly is not enough for the individual for overcoming obesity (Regmi, 2020).

5. Recommendations

One should restrict their energy intake by overall sugars and fats, greater intake of vegetables and fruits involving nuts, whole grain food, etc, and involvement in fitness or any physical activity for at least one half an hour in every 2-3 days would be beneficial for the individual in overcoming obesity and reducing weight. It is significant to assist or support people having higher obesity in both physiological and psychological manner by sustained integration of proof-dependent schemes and policies which make healthy choices of diet and physical fitness activity easily accessible, affordable, and available to each individual especially to the people who can't afford or with any reason unable to buy healthy food (Smethers & Rolls, 2018).

The industry of food has played an essential role in advertising healthy foods by decreasing several ingredients in processed food such as salt, fat, and sugar, limiting the advertising of foods in fats, sugar, and salt particularly those items of food that focused on young children and kids. By ensuring the healthier items of food availability and assisting the regular practice

of physical activity at the place of work. Avoidance of processed food items- Majorly higher food products (processed) such as various packaged salted chips, white brads are major sources of calories with empty stomachs which are assumed to adding up more often (Hwalla & Jaafar, 2021). Restricted synthesized sweeteners must be avoided and thus honey will be used as the alternative product for sweetening desired food items. Water is essential in an individual's life and plays a vital role in balancing a healthier diet. One should avoid almost every sugary beverage by their diet involving coffee and tea containing lower or no sugar. Avoiding sport and energy-based drinks with excessive and artificial sugar. Saturated fat is the major thing for causing obesity as the fat is permanently settled in the individual's body and one can face difficulty in reducing saturated fat from their body (Asghari, et. Al., 2017).

6. Conclusion

Obesity is caused due to consumption of a huge number of calories, especially food containing an excessive number of sugars and unhealthy fat, then an individual burns that extra fat by physical exercises or activities. Weight-loss devices, medicines, and bariatric surgery are some available interventions for people with obesity. In the cardiac system, changes happen as the limitation of the adaption of the cardiovascular to the excessive mass of the body and raised demands of metabolic. Excessive mass of the body needs to rise in the degree of intravascular blood and at the same time rise in the cardiac result. I've learned the importance of including healthy foods for obtaining a healthier and happy life. As the food we consume plays a vital role in our physiological and psychological wellbeing. However, obesity and overweight are the major reason for causing various diseases in an individual.

7. Contributions

Abnormal psychology is one of the branches of psychology which often dealing with abnormal behavior of an individual and psychopathology in the context of medical and clinical purposes. Normal physiology is the study in living people or animals about normal functions such as tissues, organs, cells, etc (Kotecha, et. al., 2019). In the treatment of obesity, the focus is set for diet, weight, physical exercise behaviors, habits and so on for obese people. Interventions of obesity have contributed to both normal and abnormal psychology as the individuals with obesity will get knowledge of available treatment options for them.

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Appendix

Health & Lifestyle Questionnaire

- 1) Are you doing meditation or any morning exercises? If yes, then often do you exercise?
 - Few hours in a day on (regular basis).
 - Few times in a week.
 - Few times in a month.
 - Others.
- 2) Have you played any sport during your academic years?

- 3) What are your views on integrating exercise on regular day lifestyle?

- 4) What is your source of income? _____
- 5) What are your hobbies or favourite activities which you are like doing in your free time? _____
- 6) How much time you slept in a day? _____
- 7) How often do you get anger? _____
- 8) What are the reasons for your stress? _____
- 9) What you do for removing stress or anger from you? _____
- 10) How much water you drink in a day? _____
- 11) Do you like junk food? _____
- 12) What are your food choices? _____
- 13) Are you taking enough sleep? _____
- 14) Do you think you are over eating? _____
- 15) Do you think you have improper diet and sleep? _____
- 16) What are your breakfast timings? _____
- 17) How often do you snack in a day? _____
- 18) Do you think you are overweight? _____
- 19) Are you currently having any health-related issue? _____
- 20) Rate yourself on the basis of your physical strength out of 10.
____/10

21) Rate yourself based on your fitness out of 10.

___/10

22) Rate yourself based on consuming a healthy diet out of 10.

___/10

23) Rate yourself based on your concern over your weight out of 10.

___/10

24) How important for you to improve your overall health.

- Least important.
- Moderate.
- Extremely important.

25) How important for you to tone or gain your desired shape.

- Least important.
- Moderate.
- Extremely important.

26) How important for you to involve sport or any kind of physical activity on a regular or weekly basis.

- Least important.
- Moderate.
- Extremely important.

27) How important for you to improve stress and bad mood.

- Least important.
- Moderate.
- Extremely important.