

Impact of Diet & Eating Habit on Mental and Physical Health: A Review



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Department of Pharmacy
Faculty of Allied Health Sciences
Daffodil International University

SUBMITTED BY

ID:191-29-225

Batch: 21

Section: DSC-C

Department of Pharmacy
Daffodil International University

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APPROVAL

The project paper entitled, “**Impact of Diet & Eating Habit on Mental and Physical Health: A Systemic Review**” has been submitted to fill partial supplement for Bachelor of Pharmacy (Honors) degree from Daffodil International University, Dhaka, Bangladesh, Pharmacy Department.

BOARD OF EXAMINERS

.....

Professor Dr. Muniruddin Ahmed

Professor & Head Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University.

.....

Internal Examiner

.....

Internal Examiner

.....

External Examiner

Certificate

This is to certify that the results of the investigation that are embodied in this project are original and have not been submitted before in substance for any degree of this University. The entire present work submitted as a project work for the partial fulfillment of the degree of Bachelor of pharmacy, is based on the result of author's (ID: 191-29-225) own investigation.

Supervised by



.....

Assistant Professor

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

DECLARATION

In order to partially fulfill the requirements for the degree of Bachelor of Pharmacy, I thus assure that this project report was completed by me under the direction of Mizanur Rahman, Assistant Professor, Department of Pharmacy, Daffodil International University. I hereby certify that this Project is entirely original to me. The text and associated list of references properly credit all information that has come from literary works.

Student ID: 191-29-225



Signature

Date: April 2023

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- *Rahma Islam*



THIS PROJECT WORK IS DEDICATED TO MY FAMILY AND TEACHERS
FOR THEIR DEEP CORDIAL SUPPORT, ENCOURAGEMENT & HELP.

Abstract

The impact of diet and eating habits on mental and physical health is becoming increasingly apparent, with numerous studies linking unhealthy diets to a higher chance of developing chronic illnesses such as overweight, impaired glucose tolerance, cardiovascular problems, and cancer. Additionally, research has shown that a balanced diet full of fresh produce, complete grains, lean proteins, and water can enhance mental wellbeing and consequences such as depression, anxiety, and cognitive function. Studies have linked high intake of processed foods, saturated fats, and refined sugars to negative mental health outcomes. Furthermore, eating habits, such as skipping meals or consuming excess alcohol, have been correlated with detrimental effects on both emotional and physical wellbeing. Poor eating habits have been associated with higher levels of stress, anxiety, and fatigue, which can impact mental health negatively. Similarly, skipping meals or consuming large amounts of alcohol can disrupt sleep patterns, leading to decreased results of physical wellbeing, such as weight gain, cardiovascular disease, besides decreased immune function. In conclusion, adopting a wholesome diet and pattern of eating can have a profound effect on both physical and mental health outcomes. A balanced diet that includes nutrient-dense foods can promote optimal physical health, while also positively impacting mental health outcomes such as mood and cognitive function. Moreover, avoiding unhealthy eating habits, such as skipping meals or consuming excess alcohol, can also promote optimal physical and mental health outcomes. Overall, the importance of adopting healthy eating habits for both physical and mental health cannot be overstated.

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CHAPTER ONE

INTRODUCTION



1.0 Introduction

1.1 General Information

Diet and Eating habit are the regular eating decisions people make. They differ from person to person (Wy et al., 2011). People emphasize on eating and having food. Given that individuals make over 200 eating selections per day where food desires serving a third of our everyday aspirations, on average, it still performs a significant part even when we're not actively ingesting it, it's always there. (de Ridder et al., 2017). The "knowledge" and "resources" our bodies need to function properly come from the food we eat. Without the right information, our metabolic processes weaken and our health deteriorates. The nutritional value of the food we consume has a substantial impact on how healthy we are as a whole. A renowned organization states that "excellent nutrition is vital for preserving good health, therefore good health is essential for nutritional well-being". Although many diseases and disorders are linked to poor food and malnutrition, our health can benefit from modifying the diet we intake. Eating well is a crucial component of preventing noncommunicable diseases, but understanding the significance of daily eating habits to long-term health requires further exploration. According to research, as few as 100 calories over the recommended daily intake can cause a 6-lb (3-kg) difference in weight over the course of a year. This result varies depending on the individual, their age, and their body type. Knowing that even insignificant activities may result in unfavorable results, the opposite is also conceivable. An understanding of healthy practices and the adoption of new habits can help people establish and maintain a healthy eating habit made up of a number of little activities. These novel activities are first motivated by goals and eventually could develop into habits within stable contexts. Yet, maintaining a healthy eating routine may be difficult due to environmental changes that pose a threat to the person's attempts to continue certain behaviors. Understanding what factors contribute to good eating behavior is particularly important to help healthier habits and better health results (McCarthy et al., 2017). The other significant health factor that affects us the most fundamentally is our dietary pattern. Because the causal pathway is complicated, it is impossible to calculate the complete range of health effects, both positive and negative, related to all variants on the subject of dietary pattern. According to another research, there is an growing disparity in life expectancy, which is the length of life overall, as well as health span, which is measured in years of healthy living. Such behavioral

tendency is linked to this expanding gap life. Chronic diseases linked to poor lifestyle choices are a massive and expanding burden on the world appeals for the one diet's supremacy versus another available in this situation, with hyperendemic obesity and epidemic diabetes as a backdrop, as well as the hugely lucrative industry for weight reduction and health promotion diets (Lee et al., 2012). There are many different types of diets, each with their own unique approach to nutrition and health such as Mediterranean diet, Paleo diet, Keto diet, Vegan diet, Vegetarian diet, Gluten-free diet, DASH diet, Flexitarian diet, Low-calorie diets, Fad diets, Low-fat diets, Low-glycemic diets and many more.



Figure 1.

1.2 Diet

Both a noun and a verb, diet. As a noun, it refers to dietary habits as well as a particular type of food, such a diabetic diet. When used as a verb, it means to limit the variety and/or quantity of food. (Bray & Champagne, 2019) Diet describes the overall amount of food people eat. (Zohoori, 2020) Low-calorie goods, such diet soda, are described as "diet" in food product marketing. It is a typical misunderstanding. It usually indicates the daily meals a person intake, as well as the mental and physiological states attributed to eating. Human diets are influenced by dietary requirements, regional food availability, and cultural norms. So overall speaking diet refers specifically to the specified use of some elements of regular food intake. A nutritious diet can actually assist avoid malnutrition in all of its forms as well as medical complications (NCDs) including hyperglycemia, heart disease, stroke, and cancer. Unhealthy nutrition and inadequate exercise are the two main concerns to global development. Early development of good eating practices is important. Normal growth is encouraged, and intellectual development is improved, through breastfeeding. Additionally, it could improve long-term health by reducing the risk of developing NCDs later age as well as being overweight. The balance between calorie intake and expenditure should exist. Additionally, it could improve long-term health by reducing the risk of developing NCDs later age as well as being overweight. The balance between calorie intake and expenditure should exist.. (Hooper et al., 2020; Nishida et al., 2004)



Figure 2.

1.3 Eating Habits

Eating habits are described as "conscious, group-wide, and recurring behaviors which influence people's choices and use of, particular foods and diets with regard to social and cultural influences." Factors that affect eating patterns include physiological ones (such as sex, age, genetic makeup, and health conditions), environmental ones (such as food availability), economic ones, and sociocultural ones (such as gastronomic customs, religious beliefs, social standing, and lifestyles). Many of us have ingrained patterns about our diet. Some are excellent, while others are not so excellent. In the long run, it won't be successful to make abrupt, drastic adjustments. In order to change one's eating behaviors for the better, one must take a mindful approach, reflect on all of their individual eating behaviors—both good and bad—identify common triggers for unhealthy eating (having no plan for dinner after a long day, watching television, feeling stressed about situations in our life, either at tasks or elsewhere, attending gatherings where food is consumed, stopping at fast-food outlets, and picking diets high in fat and calories are all examples of situations where you might reach for your favorite snack), replace harmful eating behaviors with healthier ones, and reinforce the healthier ones (Throughout the day, consume extra water, instead of cookies for dessert, consume fruit, to maximize your chances of success, plan and prepare wholesome meals and snacks, bring wholesome snacks to work, make nutritious lunches at home and pack them, Pay attention to the moment you get hungry, understand the distinction between true hunger and habitual eating, eating out of boredom or stress, or eating to satisfy a craving). (Lee Goldman et al., 2016)

1.4 Relation of Diet & Eating Habit

Diet and eating habits are closely related and can have a significant impact on one's wellness and perfect health. Diet is the term for the types of food a person consumes, while eating habits refer to the way a person consumes food, including when, where, and how much they eat. A balanced and healthy Eating plan can aid in the prevention of chronic illnesses like hypoglycemia, cardiovascular diseases, and overweight. While unhealthy eating habits such as overeating and consuming high-calorie, high-fat foods can increase the risk of these conditions. Research has shown that diet and eating habits can also affect mental health, with a healthy diet being associated with improved mood and reduced risk of depression. Consuming certain foods can influence the way we feel

After consuming, we must only feel healthy. It should be satisfying for our bodies and delightful. It would have an effect on our health and quality of life by eating too little or too much. One could get indifferent to eating as a result of something like this. Compulsive eating could be under our regulation., By developing the ability to make wiser, more sensible judgments, one might avoid binge snacking and mass accumulation. Upon eating, someone who has learned to regulate their hunger may feel calm, energized, and attentive. Changing ingrained bad eating patterns can have a number of favorable results, including an improvement in energy and alertness. a more favorable food relationship, better health, easier movement, and a more positive body image. It is essential to create behavioral interventions that are effective at enhancing diet quality. (Brug et al., 2003)

1.5 Nutrients & Diet

The body needs nutrients, which are chemical elements present in food, to produce energy, provide the body structure, and assist in controlling chemical reactions. In excess of 40 distinct mixture of nutrients, which are often categorized into the following 7 main groups: dietary fiber, vitamins, minerals, proteins, fats, and carbohydrates & Water. Nonetheless, each of the seven prime nutrient groups has essential functions to perform in our bodies and are all required since they maintain our general health. (Alice Callahan et al., 2020) We all eat, so that's one thing we have in common. People differ in what, when, why, and how much they consume. We frequently base our meal decisions on factors like flavor, familiarity, price, and/or availability. Our body may not always require us to eat what we desire to eat. Nutrient deficiencies in the diet can cause issues with weight and health. The nutrients found in a variety of foods are crucial for maintaining the body's regular processes. In addition to the main nutrients, there are other bioactive food ingredients called "phytonutrients" that are crucial for maintaining health of individuals. They have a significant repercussion for the health plan program and may offer medical advantages such as illness prevention and/or therapy and the management of different physiological conditions. By preserving and regulating immune function, phytonutrients help avoid specific health conditions. (Gupta & Prakash, 2014)

1.6 Classification of Diets

There are various ways to classify diets, one of the most popular methods is by the content of the macronutrients. Numerous macronutrients are required for everyday activity and physical function maintenance— nutrients that offer power or calories— are required. Specifically, carbs, proteins, and fats are the three macronutrients. (Katz & Meller, 2014) Diets can be divided into a variety of categories based on their macronutrient content and intended use, including:

- Low-carbohydrate
- Low-fat
- Vegan
- Low-glycemic
- Mediterranean
- Mixed/balanced
- Paleolithic

Table-1 (*Unhappy Meals - Michael Pollan - The New York Times*, n.d.)

	Low-carbohydrate	Low-fat/ vegetarian/vegan	Low-glycemic	Mediterranean	Mixed/balanced	Paleolithic
Health benefits relate to:	Emphasis on restriction of refined starches and added sugars in particular.	Emphasis on plant foods direct from nature; avoidance of harmful fats.	Restriction of starches, added sugars; high fiber intake.	Foods direct from nature; mostly plants; emphasis on healthful oils, notably monounsaturates.	Minimization of highly processed, energy-dense foods; emphasis on wholesome foods in moderate quantities.	Minimization of processed foods. Emphasis on natural plant foods and lean meats.
Compatible elements:	Limited refined starches, added sugars, processed foods; limited intake of certain fats; emphasis on whole plant foods, with or without lean meats, fish, poultry, seafood.					
And all potentially consistent with:	Food, not too much, mostly plants^{a,b,c}.					

1.6.1 Low-Carbohydrate Diet

Low-carb diets are often considered by limiting intake of overall carbohydrates below a predetermined level. The Institute of Medicine's Dietary Reference Intakes set the acceptable range for appropriate carbohydrate consumption at 45% to 65% calorie total. A low-carbohydrate diet is one in which the overall average minimum consumption of carbohydrates is less than 45% of the total calories (Trumbo et al., 2002). Because of the rate of obesity as well as the search for efficient weight loss and weight control methods, low-carbohydrate diet has become more popular in recent years. Advocating for low-carbohydrate diets has a tendency to highlight the shortcomings. Numerous low-fat suggestions for managing weight and preventing chronic diseases at the population level, but this misrepresents the dietary advice's basic aims. (Katz et al., n.d.) Low-carbohydrate diets have been demonstrated to be useful for losing weight, and they may also improve metabolic function and quality of life. These trials, however, were unable to separate the effects of calorie restriction, carbohydrate restriction, and carbohydrate-specific restriction. (Boling et al., 2009; Brehm et al., 2003; Munsters & Saris, 2014) The cardiometabolic benefits of weight loss may be increased or diminished by low-carb eating, but the data is still divided about long-term implications. In the setting of obesity, high-protein diets may provide benefits related to improved satiation. In low-carbohydrate diets, the proportion of calories from fat and/or protein in the diet is increased. Diets high in protein may have advantages for improved satiety. (Belza et al., 2013) Although there aren't conclusive proof that Low-carbohydrate regimens are healthier unlike available options, their possible drawbacks in other areas deserve attention. (Bastian et al., 2012) According to studies, low-carb diets are more effective than other dietary plans at causing quick weight loss over the first 6 to 12 months. (Bueno et al., 2013; Nordmann et al., 2006; Tobias et al., 2015) Rather than being actually low in carbohydrates, low-carbohydrate diets are carbohydrate-selective. Strong research supports the short-term health benefits of some carbohydrate restriction with a moderate increase in protein and/or fat intake. There are not many studies that address health consequences across the lifespan.

1.6.2 Low Fat Diet

Low-fat diets have a dwell on limiting overall fat consumption from all sources below a certain criterion, which is logically placed around 20% of daily calories or the lower end of the suggested range specified by studies. The majority of vegetarian diets consist of plants, although they may also occasionally incorporate dairy, eggs, and additional meat products including fish with other shellfish. (Trumbo et al., 2002) The Okinawans and Seventh Day Adventists are two groups with substantial inhabitants-level exposure to low-fat, vegetarian, or mostly vegetable-based eating habits. The primates' diets consist of predominantly plant-based and low in total fat, reflecting the first variations of diets of native humans and hominids, which later developed to incorporate extra protein as a result of the act of hunting. (Mann, 2000) Fat limitation has been demonstrated to provide advantages in intervention studies, including weight loss, enhanced biomarkers, decreased cardiac events, and death. However, evidence from a study indicates that implementation of a reduced fat, high-starch, and sugar-rich diet diets may have increased overall calorie intake. Low-fat recommendations were meant to promote the use of naturally low-fat foods rather than heavily processed, fat-reduced items. (Jéquier & Bray, 2002) In persons at high risk for myocardial infarction, low-fat, vegetarian diets have been demonstrated to lessen incidence of recurrent MI (Ornish et al., 1998) , with benefits that are equivalent to but not clearly superior to those of a Mediterranean diet. (De Lorgeril et al., 1999) Unusually, coronary artery atherosclerosis has been demonstrated to reverse in response to a very low-fat diet. (Ornish et al., 1990) One direct allegory of minimal-fat and low-carb diets revealed positive endothelial activity impacts, implying better whole coronary improvement from the low-fat diet. (Phillips et al., 2008)

1.6.3 Low Glycemic Diet

By reducing consumption of dietary items with a significant glycemic load or index, low-glycemic diets aim to reduce total glycemic index of diets and given the current state of the data, federal authorities have decided not to include the glycemic index or glycemic load in diet recommendations of the general public. It has been demonstrated that low-glycemic diets are good for vascular health, weight reduction, insulin utilization, and diabetes management. (Lundin & Alaedini, 2012) High glycemic load, however, has been tied with a higher cardiovascular events risk. There are other options available. (Ma et al., 2012) The glycemic index has sparked certain dubious dietary

trends, such avoiding foods like dense-glycemic-index fruits and vegetables. Low-glycemic diet is accomplished by avoiding refined starches and sugary sweeteners and embracing fresh, unprocessed meals. All other nutritional regimens are consistent with this strategy.

1.6.4 Vegan Diet

Eating vegan, which forgoes all animal products, can be done successfully or poorly. Vegans are ethical consumers who frequently follow the eating pattern due to concerns for their own health and the welfare of animals. (Abdulla et al., 1981) When done properly, vegan diets are linked to health advantages. (Giffin, 2015) Short- to medium-term intervention trials point to advantages in terms of overall food value, anthropometry, inflammatory processes, heart comorbidities, cancer risk, and glucose tolerance. (Dewell et al., 2008) Long-term vegans frequently have a good understanding of the necessity of combining plant diets to provide adequate protein. (Craig, 2009)

1.6.5 Mediterranean Diet

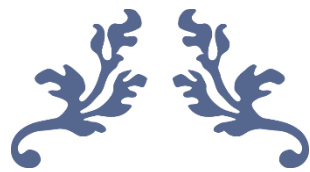
The recurring components of a conventional dietary habit that predominates in Middle Eastern regions are the basis for Mediterranean diets: place emphasis on beans, lentils, nuts, seeds, and olive oil, as well as fruits, vegetables, and nuts, particular dairy ingestion and wholesome grains; frequently fish and other seafood; and a relatively low meat intake. Moderate wine consumption is frequently specifically mentioned as well. (Trichopoulou et al. 2009) The benefits of moderation, familiarity, palatability, connections with satisfaction and health, and a variety of dietary patterns make up the Middle eastern food. It has a connection to lifespan in addition with vitality. It often has positive implications on the saturated fatty acid ratio of omega-3 fats to omega-6, high fiber intake, and abundant antioxidant and polyphenol ingestion. (Zamora-Ros et al., 2013) Consuming a Mediterranean-style diet has been associated with improved lifespan, cognitive function, and a lowered danger of heart disease and cancer. (de Lorgeril & Salen, 2006)

1.6.6 Balanced Diet

A well-balanced diet is one of the key factors in health. It offers the right amount of nourishment and energy for optimum development and growth. Any food category in excess should not be done. Include in your diet foods that are low in glycemic index, high in alimentary fiber, and antioxidant-rich. A healthy diet stops the body's physiological processes from deteriorating with age, increases longevity, resistance, and delays the spread of deteriorating conditions. An adequate amount of energy and nourishment are provided by a balanced diet for normal growth and development. In order to prevent diseases linked to diet, a balanced diet should be implemented. Diet availability and proper flavor should be taken into account. According to the socioeconomic situation and caloric need, necessary items from each of the food groups should be chosen in order to produce a balanced diet. Your age, sex, height, weight, and degree of activity all affect how many calories you need to maintain your weight. An individual's energy needs and the requirements for all macro- and micronutrients should be met by a balanced diet. So excessive consumption of salt, salty foods, sweets, chocolate, saturated fat, and trans-fat, foods high in cholesterol, and processed foods should be avoided while designing a balanced diet. (Chakrabarty & Chakrabarty, 2019)

1.6.7 Paleolithic Diet

Paleolithic diets include lean meats, fruits, veggies, nuts, and seeds in an effort to mimic our Stone Age ancestors' meals. A rich consumption of plant-based foods, dietary fiber, and 25% of total calories coming from fat were adapted to the Paleolithic diet. This is higher than the amount connected with vegetarian/low-fat diets but below the average level in the US today and in Mediterranean nations. Nevertheless, there is a lot of diversity in how the criteria are interpreted and used, and it is impossible to replicate the diet of the Stone Age. (Eaton et al., 1997) A Paleolithic diet would be rich in fruits, veggies, nuts, and seeds, fiber, and glycemic index, with collected plant items making about of our stone Age is 50% ancestors' calories. It would also be relatively low in fat and carbohydrate sources. Lean meat is still prioritized, which is unusual and could have benefits for satiety. (Jönsson et al., 2010)



CHAPTER TWO

OBJECTIVE OF THE STUDY



2.0 Objective of the study

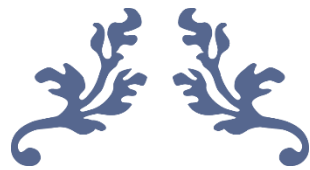
2.1 General Objective & Specific Objective:

General objective:

To determine the role of diet & eating habit on mental & physical health.

Specific objective:

- a. To aware people about their day-to-day diet and eating habit.
- b. To summarize the current state of knowledge on diet and eating habit.
- c. To categorize different type of diets.
- d. To find out the effect of healthy eating on mental and physical health.
- e. To accumulate the findings for further research.



CHAPTER THREE

METHODS



3.0 Methods

3.1 General Approach

In this study a general estimate of the impact of the diet and eating habit such as the effect of healthy and unhealthy eating, their role in both creation and prevention of diseases are outlined in detail. This study categorizes different type of diets present in current world. Moreover, it shows the how badly diet and eating habit is important in our daily life. It summarizes how various serious diseases are impacted by it and how are body benefits from a healthy, balanced diet.

4.2 Search Strategy

From the year 1990 to 2023, traditional textbooks and databases such as Web of Science, Scopus, Science Direct, Google Scholar, Elsevier, Semantic Scholar & PubMed were searched using the following descriptors: "diet" or "eating habit," "impact of diet on physical health" or "impact of diet on mental health," without restriction as to the papers' language or the subjects of the search.

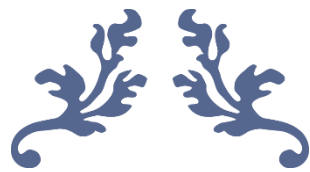
4.3 Inclusion and Exclusion Criteria

Inclusion criteria:

- General effect of diet & eating habit for adults
- Common preferred diets & eating habit
- Emphasis of both healthy & unhealthy diet on mental & physical health

Exclusion criteria:

- Effects of specific diets on mental & physical health are not mentioned
- No comparison of different diets.



CHAPTER FOUR

RESULT & DISCUSSION



4.0 Result & Discussion

4.1 Effects of Unhealthy Diet & Eating Habits on Physical Health

Unhealthy eating patterns have spread across the globe in recent years, which has contributed to an increase in chronic illnesses including obesity, type 2 diabetes, and cardiovascular disease. While a diet high in whole foods, lean proteins, and healthy fats has been shown to promote overall wellbeing and lower the risk of chronic diseases, a diet high in processed foods, refined sugars, and saturated and trans fats has been linked to an increased risk of these chronic diseases. (Mozaffarian et al., 2016) a high intake of saturated and trans fats has been linked to an increased risk of cardiovascular disease (CVD) (Malik et al. 2019). Secondly, diets high in added sugars and refined carbohydrates have been linked to an increased risk of obesity, type 2 diabetes, and other chronic diseases. (Evert et al., 2019) Additionally, diets high in sodium have been linked to high blood pressure and an increased risk of stroke. (O'Donnell et al., 2013) Furthermore, the negative effects of unhealthy eating habits extend beyond the risk of chronic diseases. Diets lacking in essential nutrients, such as vitamins and minerals, can result in deficiencies that cause a range of health problems(Fletcher & Fairfield, 2002). Inadequate intake of calcium, for example, can lead to osteoporosis, while a deficiency in iron can cause anemia. Unhealthy eating habits can also have a detrimental effect on gut health, which has been linked to numerous health issues. (De Palma et al., 2014)



Figure 3.

4.1.1 Cardiovascular Diseases

Unhealthy eating habits have been associated with a higher risk of cardiovascular diseases (CVDs), which remain a leading cause of death worldwide. Several studies have investigated the relationship between unhealthy eating and CVDs, highlighting the importance of a balanced diet in preventing and managing these conditions. Research has shown that a diet high in saturated and trans fats increases the risk of developing CVDs by promoting the buildup of cholesterol in the arteries and increasing blood pressure. (Jakobsen et al., 2009) Similarly, diets high in added sugars and refined carbohydrates have been linked to obesity and type 2 diabetes, both of which are significant risk factors for CVDs. (Evert et al., 2019b) High intake of saturated and trans fats can raise low-density lipoprotein (LDL) cholesterol levels, leading to the development of atherosclerosis, a key contributor to CVD. (Mensink et al., 2003) Diets high in added sugars and refined carbohydrates can lead to insulin resistance and inflammation, contributing to the development of metabolic syndrome, a risk factor for CVD. (Johnson et al., 2007) Inadequate intake of fruits and vegetables, which are rich in antioxidants and fiber, can contribute to oxidative stress and inflammation, which are key contributors to the development of CVD. (Cagnina et al., 1999)

4.1.2 Obesity

Obesity is a major global health concern affecting people of all ages, gender, and race. Unhealthy eating habits are among the primary causes of obesity. A poor diet, characterized by high intake of energy-dense foods that are high in fat, sugar, and salt, coupled with low intake of fruits, vegetables, and fiber, contributes to the development of obesity. Research studies have shown that unhealthy eating habits, such as consuming fast food and sugary beverages, are associated with an increased risk of obesity. A diet high in added sugars, especially from sugary beverages, has been linked to weight gain and an increased risk of obesity. Similarly, consuming fast food, which is often high in calories, saturated fat, and sodium, has been found to be a significant contributor to obesity. (Malik et al., 2013) Calories that we eat in excess of what our bodies require are stored as fat. This can eventually result in weight gain and obesity. Unhealthy eating patterns can lead to ingesting more calories than our bodies require, including eating fast food, drinking sugary beverages, and consuming processed meals. (Sieber et al., 2014)

4.1.3 Diabetes

Diabetes is a chronic metabolic disorder characterized by high blood glucose levels. Unhealthy eating habits are known to contribute to the development of diabetes, with numerous mechanisms involved. Diets high in refined carbohydrates can lead to insulin resistance, causing glucose to build up in the bloodstream. (Kahn & Flier, 2000) Excess sugar consumption can lead to inflammation and oxidative stress, contributing to insulin resistance and damage to pancreatic cells. (Aeberli et al., 2011) Diets high in saturated and trans fats can contribute to insulin resistance, inflammation, and damage to pancreatic cells. (Association, 2010) Low-fiber diets can increase the demand for insulin and contribute to insulin resistance. (Jenkins et al., 2018) Diets low in omega-3 fatty acids can increase the risk of insulin resistance and damage to pancreatic cells. (Simopoulos, 2016) Excessive alcohol consumption can increase the risk of insulin resistance, impaired pancreatic function, and obesity, all of which can increase the risk of diabetes. (Baliunas et al., 2009) The Western-style diet, which is characterized by high intake of processed foods, red meat, and saturated fats, has been linked to an increased risk of diabetes. (Willett et al., 2019)

4.1.4 Cancer

Cancer is a complex disease that can be caused by a variety of factors, including genetics, environmental exposures, and lifestyle choices. Among these factors, unhealthy eating habits have been identified as a significant risk factor for several types of cancer. Unhealthy eating can increase the risk of cancer by promoting inflammation, oxidative stress, and hormonal imbalances in the body. A diet that is high in processed foods, refined carbohydrates, and saturated and trans fats has been linked to an increased risk of several types of cancer, including breast, colon, and prostate cancer. (Holmes et al., 1999) Processed foods are often high in sugar, salt, and unhealthy fats, which can contribute to inflammation in the body. Chronic inflammation has been linked to the development of several types of cancer, including colorectal cancer. (Zitvogel et al., 2013) Additionally, high levels of sugar in the diet can promote the growth of cancer cells, as cancer cells rely on glucose for energy. (Klement et al. 2014) Saturated and trans fats found in many animal products and processed foods, can also contribute to the development of cancer by increasing oxidative stress which occurs when there is an imbalance between free radicals and antioxidants in the body, and it can damage cells and DNA which can lead to the development of cancer. (Storz, 2005)

4.2 Effects of Unhealthy Diet & Eating Habits on Mental Health

Unhealthy eating habits can have a significant impact on an individual's mental health. Studies have shown that consuming a diet high in saturated fats, refined carbohydrates, and processed foods can increase the risk of developing depression, anxiety, and other mental health disorders. One of the primary ways that unhealthy eating habits can affect mental health is through inflammation. Inflammatory markers have been linked to depression, anxiety, and other mental health disorders. (Jacka, 2017) Consuming a diet high in processed foods and unhealthy fats can lead to chronic inflammation, which can worsen mental health symptoms. Additionally, unhealthy eating habits can negatively impact gut health, which has been linked to mental health disorders such as depression and anxiety. (Foster & McVey Neufeld, 2013) Research has also shown that consuming a diet high in sugar can increase the risk of developing depression and anxiety. (Sathyanarayana Rao et al., 2008) Studies have found that consuming a high-sugar diet can lead to changes in brain chemistry, including a decrease in the production of brain-derived neurotrophic factor (BDNF), which is essential for healthy brain function. (Solfrizzi et al., 2006) Another way that unhealthy eating habits can impact mental health is through nutrient deficiencies. Consuming a diet low in essential nutrients, such as omega-3 fatty acids, magnesium, and B vitamins, can increase the risk of developing mental health disorders. (Bourre, 2004)



Figure 4.

4.2.1 Depression

Depression is a common mental health disorder that affects millions of people worldwide. While there are many factors that can contribute to the development of depression, research has shown that unhealthy eating habits can be a significant risk factor. One of the primary ways that unhealthy eating can cause depression is through inflammation. Chronic inflammation has been linked to the development of depression, and a diet high in processed foods and unhealthy fats can contribute to chronic inflammation. (Berk et al., 2013) Additionally, unhealthy eating habits can negatively impact gut health, which has been linked to mental health disorders such as depression. (Foster & McVey Neufeld, 2013) Research has also shown that consuming a diet high in sugar can increase the risk of developing depression. (Gangwisch et al., 2015) A study found that individuals who consumed a diet high in sugar and processed foods were more likely to experience depression than those who consumed a diet rich in whole foods. (Jacka et al., 2011) Nutrient shortages are another way that poor eating habits might cause depression. (Bourre, 2004)

4.2.2 Anxiety

An individual's quality of life may be greatly impacted by anxiety, a common mental health problem. Research has shown that poor eating patterns can be a substantial risk factor for anxiety, even if there are many other factors that may also play a role. Through the gut-brain axis, unhealthy eating can be one factor in the emergence of anxiety. A diet heavy in processed foods and excessive fats can have a severe influence on gut health since the gut microbiota plays a crucial role in controlling anxiety. (Foster & McVey Neufeld, 2013) Additionally, a diet rich in sugar and refined carbohydrates can result in blood sugar spikes and crashes, which can cause anxiety symptoms like agitation and unease. (Durack & Lynch, 2019) Anxiety was shown to be more common in those who had a diet high in sugar and refined carbohydrates than in people who followed a healthy diet, according to research. (Sánchez-Villegas et al., 2012) Furthermore, eating a diet deficient in vital nutrients like magnesium, B vitamins, and omega-3 fatty acids can raise the risk of anxiety. (Bourre, 2004) According to study, those who maintain a healthy weight are less likely to feel anxiety than those who are overweight or obese. Anxiety can be exacerbated by unhealthy eating patterns that result in weight increase since they can also cause low self-esteem, a negative body image, and social isolation. (de Wit et al., 2010)

4.2.3 Mood Swings

Mood swings are abrupt, significant shifts in one's emotional state that are frequently accompanied by emotions of impatience, anger, or melancholy. Even though there are many things that might cause mood swings, research has shown that poor eating habits can be a substantial risk factor. Eating a lot of processed carbs and sugar might cause mood changes. These foods cause blood sugar levels to rise quickly, then drop suddenly, which can cause fatigue, irritability, and mood swings. (Akbaraly et al., 2009) It was found in a study that individuals who consumed a diet high in sugar and refined carbohydrates were more likely to experience mood swings than those who consumed a healthy diet. Similarly, eating a diet rich in trans and saturated fats has been connected to higher levels of inflammation in the body, which can cause mood swings. (Lassale et al., 2019) Neurotransmitter equilibrium in the brain can be upset by inflammation, resulting in mood swings and irritation. (Miller & Raison, 2016) Likewise, eating a diet deficient in vital nutrients like magnesium, B vitamins, and omega-3 fatty acids can raise the risk of mood swings. (Bourre, 2004) studies have shown that people who maintain a healthy weight are less likely to experience mood swings than those who are overweight or obese. (de Wit et al., 2010)

4.2.4 Cognitive Decline

Poor eating practices can significantly affect cognitive function and raise the danger of cognitive decline. Inflammation and oxidative stress, which can harm brain cells and impair cognitive function, can result from eating a diet heavy in saturated fats, sugar, and processed foods. A diet heavy in saturated fats has been linked in studies to cognitive deterioration. According to research, those who consume a diet heavy in saturated fats score worse on cognitive tests than people who maintain a healthy diet. (Morris et al., 2003) A high-sugar and processed diet has been linked to an increased risk of dementia and cognitive decline, according to study. (Solfrizzi et al., 2011) A diet lacking in critical vitamins and minerals including vitamin E, B vitamins, and omega-3 fatty acids can raise the risk of cognitive impairment. (Morris et al., 2002) A diet heavy in trans fats raises the risk of Alzheimer's disease and cognitive impairment . Trans fats have been associated with oxidative stress and inflammation, which can harm brain tissue and impair cognitive performance. (Beydoun et al., 2022)

4.3 Benefits of a Healthy Diet & Eating Habit for Physical Health

To maintain excellent physical health, one must follow a nutritious diet. A balanced diet gives the body the vitamins, minerals, and nutrients it needs to develop and repair tissues, control metabolism, and strengthen the immune system. Maintaining a healthy weight and lowering the risk of obesity, which is a risk factor for chronic illnesses including diabetes, heart disease, and cancer, may be accomplished with the support of a balanced diet. (WHO and FAO, 2003) According to research, those who ate healthily had a much-decreased chance of becoming obese. (Mozaffarian et al., 2011) A good diet can also lower the chance of developing heart disease. A study discovered that those who ate healthily had a considerably decreased chance of acquiring heart disease. (Hu, 2002) Blood pressure, cholesterol, and blood sugar levels may all be lowered and improved with a balanced diet, all of which are risk factors for heart disease. A good diet can also lower the chance of developing some malignancies. (R et al., 2013) According to research those who ate healthily were less likely to have breast cancer and colorectal cancer than those who didn't. (McCullough et al., 2002)

Healthy Eating Habits



Figure 5.

4.4 Benefits of a Healthy Diet & Eating Habit for Mental Health

A balanced diet has a big influence on mental health in addition to being important for sustaining physical health. Food has an impact on how our brains work, how we feel, and how we behave. A nutritious, well-balanced diet can enhance mental health and lower the risk of mental diseases. A healthy diet can reduce the risk of depression and anxiety. (Akbaraly et al., 2009) A balanced diet may also lessen the signs of anxiety and depression, according to research. (Opie et al., 2017) An omega-3 fatty acid-rich diet can elevate mood and lower the risk of depression. (Sarris et al., 2015) A balanced diet can also enhance cognitive function and lower the risk of cognitive decline. (Morris et al., 2015) Additionally, a healthy diet can enhance the quality of sleep, which is crucial for good mental health. According to research people who ate a diet high in fruits and vegetables experienced higher sleep quality. (Grandner et al., 2013) While processed meat and milk consumption were negatively correlated with mental health and sleep quality, a healthy diet high in vegetables, fruit, fish, water, and fiber was positively associated with both. (Hepsomali & Groeger, 2021) A good diet can enhance gut health, which in turn can enhance mental health, as the gut-brain axis is crucial for mental health. (Businaro, 2022)



Figure 6.

4.5 Importance of Balanced Diet

For preserving excellent health and preventing chronic diseases, a balanced diet is essential. A balanced diet can help lower the risk of heart disease, stroke, and type 2 diabetes, according to a study. All dietary groups, including fruits, vegetables, whole grains, lean proteins, and healthy fats, should be represented in a balanced diet. These meals include vital elements including fiber, vitamins, and minerals that are required for optimum health. (Schwingshackl et al., 2018) All dietary groups, including fruits, vegetables, whole grains, lean proteins, and healthy fats, should be represented in a balanced diet. Vitamins, minerals, and fiber, which are crucial for sustaining good health, are abundant in fruits and vegetables. A diet high in fruits and vegetables can lower the risk of heart disease and stroke. (Wang et al., 2014) A healthy diet should include whole grains because they are a rich source of fiber, which can lower the risk of developing heart disease, diabetes, and certain types of cancer. (Aune et al., 2016) For the body to grow and repair tissues, lean proteins like those found in fish, chicken, and legumes are crucial. A study indicated that eating a lot of protein can help maintain muscle mass and lower the risk of sarcopenia, a condition that causes muscle loss and weakness in older adults⁵. Good fats from foods like nuts, seeds, and fatty fish are crucial for preserving excellent health. A balanced diet is essential for maintaining both physical & mental health. (Houston et al., 2008)



Figure 7.



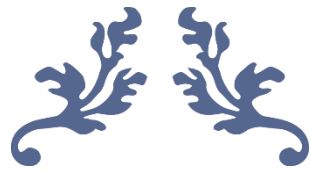
CHAPTER FIVE

CONCLUSION



5.0 Conclusion

In conclusion, it is clear that our diet and eating habits have a significant impact on both our mental and physical health. Consuming a balanced diet that is rich in fruits, vegetables, whole grains, lean proteins, and healthy fats can help to improve our physical health by reducing the risk of chronic diseases such as obesity, type 2 diabetes, cardiovascular disease, and cancer. Moreover, studies have shown that a healthy diet can also have a positive impact on our mental health by reducing the risk of depression and anxiety. On the other hand, consuming a diet that is high in saturated fats, refined sugars, and processed foods can lead to inflammation, insulin resistance, and oxidative stress, all of which are risk factors for chronic diseases and can negatively impact our mental health. Therefore, it is essential to pay attention to our diet and eating habits and make conscious choices to ensure that we are fueling our bodies with the nutrients they need to function optimally. This can involve making small changes such as reducing our intake of processed foods and sugary drinks and increasing our intake of fruits and vegetables. With the right diet and eating habits, we can improve both our mental and physical health and lead a healthier and happier life.



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