COURSE GUIDE

HED 413
PUBLIC HEALTH AND ISSUES IN HEALTH EDUCATION

Course Team   Dr. Prince Christian Ifeanachor Umoke (
Department of Human Kinetics and Health
Education, University of Nigeria, Nsukka
Prof. Francisca Chika Anyanwu (Course Editor)-
University of Ibadan

NOUN

NATIONAL OPEN UNIVERSITY OF NIGERIA

CONTENTS   PAGE

HED 413 PUBLIC HEALTH AND ISSUES IN HEALTH EDUCATION

This course is very important to the understanding and practice of Public Health and Issues that affects the population in Health Education, i.e. the concept of public health, obesity, underweight, emotional health growth, development, family size and population control. The course will also focus on stress and health, labour saving device and health.

INTRODUCTION

This course is very important to the understanding and practice of Public Health and Issues in Health Education. These public health issues are problems because they affect a significant portion of the population. Issues that will be discussed include nutritional abnormalities like obesity and underweight others are emotional health challenges, human development, concept of family size and how it contributes to population growth and even the effect of stress and labour saving machines on health. This course will help empower you to live healthier lives and as a health professional and health educator, you can educate and empower individuals and communities to improve their physical, social, mental, and emotional health by increasing their knowledge and influencing their attitudes about caring for their overall health and well-being.

COURSE COMPETENCIES

The aim of this course is to Equip you with relevant knowledge, attitude and skills required to be helpful health professionals and health educators on public health perspectives and contemporary issues in health education so that in your capacity as a health professional you will have all it takes to educate and empower individuals for healthful living. Specifically, this will involve:

i. To understand the concept of public health and its history
ii. To identify and explain public health issues like the non-communicable Diseases such as obesity and underweight; knowing how it affects the body and the steps to prevent its occurrence among the populace.
iii. To understand the concept of emotional health and the emotional needs of individuals and explain the various stages of human development.
iv. To understand the concept of family size, population growth and controlling over population in the country.

v.   To understand the concept of stress and labour saving device on health, and how the misuse and abuse of these devices also lead to much health associated problems.

COURSE OBJECTIVES

By the end of this course, you will be able to:

i.   Define public health and explain the Historical background of public health
ii.   Non Communicable Diseases (NCDs) with emphasis on obesity and underweight
iii.   Meaning, causes, types and risk factors of obesity and underweight
iv.   Complications/ health problems linked with obesity and underweight
v.   Prevention, diagnosis and treatment of obesity and underweight
vi.   Controlling Non Communicable Diseases in Nigeria
vii.   Major barriers to the prevention and control of NCDs in Nigeria
viii.   Explain emotional health growth and ways to boost emotional health
ix.   Define emotional intelligence and explain the emotional health needs of various groups.
x.   Explain Development, and the various stages of human development
xi.   Distinguish the characteristics of human at each developmental stage (prenatal, infancy through childhood, adolescence, emerging adult and adulthood) under physical, cognitive, and psychosocial changes.
xii.   Explain family, family size and the core messages in family life education.
xiii.   Describe population, the concept of population size and growth.
xiv.   Enumerate the advantages and disadvantages of a large population and the population pressures in the environment.
xv.   Explain family planning and its benefits to the society.
xvi.   Explain the meaning, type, causes and the signs of stress.
xvii.   Describe the coping strategies used in management of stress and how stress manifest in the healthcare environment.
xviii. Explain labour saving devices, its examples, advantages and effect on health.

WORKING THROUGH THIS COURSE

You need to read this course material, each unit with good understanding, as well as to be able to state the objectives of obesity, underweight, emotional health growth, development, family size and

population control, stress and health, labour saving device and health. You should be able to execute the self-assessment exercises in each of the units very correctly.

This course material also provides you with references to relevant texts and links that can enhance your understanding of the units in the modules.

STUDY UNITS

There are 15 study units in this course divided into six Modules. The modules and units are presented as follows.

CONTENTS

Module 1

Unit 1   Obesity
Unit 2   Underweight
Unit 3   Controlling Non Communicable Diseases in
           Nigeria

Module 2

Unit 1   Introduction to Emotional Health Growth
Unit 2   Emotional Intelligence

Unit 3   Emotional Health Needs of Various Age Groups

Module 3

Unit 1   Prenatal Development
Unit 2   Infancy through Childhood and Adolescence Stage
Unit 3   Emerging Adulthood and Adulthood

Module 4

Unit 1   Family Size and Family Life Education
Unit 2   Population Size and Growth
Unit 3   Family Planning and Its Benefits

Module 5

Unit 1   Introduction to Stress
Unit 2   Impact of Stress on Health and Coping
           Strategies

Module 6

Unit 1   Labour Saving Devices and Health

MAIN COURSE

CONTENTS   PAGE

MODULE 1   NON-COMMUNICABLE DISEASES

INTRODUCTION

Non-communicable diseases (NCDs) are increasingly becoming the leading causes of morbidity and mortality worldwide. They include illnesses such as: Cancers, Diabetes mellitus, cardiovascular disease, chronic respiratory diseases, **"obesity"**, **"underweight"** and musculoskeletal disorders. Public health has come to solve the problem of NCDs. Charles-Edward A. Winslow defined public health as "the science and art of preventing disease, prolonging life, and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing service for the early diagnosis and prevention of diseases, and the development of the social machinery which will ensure that every individual in the community has a standard of living that is adequate for the maintenance of health."

HISTORICAL BACKGROUND OF PUBLIC HEALTH

The history of public health has been a history of humanity's battle with disease and premature death frequently referred to as the old public health. The early efforts in disease prevention were directed at providing access to potable water, safe housing, and more nutritious and hygienic sources of food, especially meat products. Also of major concern were issues of personal hygiene, hand washing, town sewerage systems, quarantine laws, screening and population-based surveillance, disinfection, and vaccination. For developed societies, these measures led to higher rates of perinatal and maternal survival, decreases in infectious diseases, and increased life expectancy at all ages. After World War II, diseases of aging and affluence began to occupy focus point of the public health agenda in these nations, although the problems of infectious diseases and poverty-related illness and death would continue to engage the health resources of third world countries. However, in the 1980s, a new awareness about health promotion in public health filled out its idea of anti-disease public health with a complementary pro-health vision. Diseases such as circulatory illness, heart attacks, strokes, deep venous thrombosis, and cancers became targets of new forms of surveillance, screening, and prevention. In wealthy societies, people were found to be overeating, overworking, and risking themselves to substances such as tobacco, alcohol, asbestos, and ultraviolent radiation. Sedentary lifestyles had reduced fiber and increased fat in the diet and reduced exercise and fitness levels. International and workplace migration increased social and psychological stress as well as the desire for harmful forms of

recreation. Automobile accidents, suicide, and drug-related deaths have increased our patterns of morbidity and mortality. Health Promotion Initiatives campaigns now became a targets of new prevention and harm reduction of so many of our recent patterns of lifestyle and illnesses arising from it.

The impact of non-communicable disease is more on the poor countries of sub-Saharan Africa of which Nigeria occupy a significant place. This is because they are often unable to access health care and services required to prevent and treat NCDs. The budget for health has remained focused on reducing the already overwhelmed burden of communicable diseases and preventable causes of infant and maternal mortality. Therefore, it is not an overstatement to describe the situation in developing nations as an imminent calamity; a disaster for health, for society and most of all for countries' economies. The misconception that NCDs afflict mostly the wealthy population by developing nations has been dismissed. However, the developed nations are equally partaking in the jeopardy, but while the developing nations are facing a double burden, the high income, and developed countries are experiencing a move in the health trend from communicable to non-communicable diseases.

Health experts in Nigeria argue that though the federal government, international health bodies and even some civil society groups have intervened and shown commitments to combat non-communicable diseases in the country, progress has remained slow. Non-communicable diseases like heart disease, stroke, cancer, diabetes and chronic lung disease, are collectively responsible for almost 70 per cent of all deaths worldwide, according to World Health Organization (WHO). The organization says that in low- and middle-income countries, nearly three quarter of all non-communicable diseases deaths, and 82% of the 16 million people who died prematurely, or before reaching 70 years of age, occur. Globally NCDs are a major source of disease and death. Research by WHO, 2018 in Nigeria, showed NCD prevalence to stand at 29%, Cardio vascular diseases at 11%, cancer 4% and diabetes 2%. Concerted effort has to be made to reduce the prevalence to the barest minimum. In most countries, their focus on health is mostly on healthcare services. The key strategy in reducing NCD is to use a multisectoral approach. Due to the fact that different sectors have different contributions to make towards solving this problem.

Unit 1   Obesity
Unit 2   Underweight
Unit 3   Controlling Non Communicable Diseases in
              Nigeria

UNIT 1   OBESITY

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
       3.1   Meaning of Obesity
       3.2   Classes of Obesity
              3.2.1   Adult Body Mass Index (BMI)
              3.2.2   Childhood Obesity
       3.3   Types of Obesity
       3.4   Causes of Obesity
       3.5   Risk Factors for Obesity
       3.6   Complications/ Health Problems Linked with Obesity
              3.6.1   How Obesity Affect the Body
       3.7   Prevention, Diagnosis, and Treatment
              3.7.1   Prevention of Obesity
              3.7.2   Diagnosis of Obesity
              3.7.3   Treatment of Obesity
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Before now, the burden of non-communicable diseases (NCDs) was thought to be a problem affecting only developed world. However, current evidence has shown that the problem affects the developing nations more than the developed ones. Because of the reduction in prevalence of many infectious diseases and a steady increase of NCDs as major causes of death, Nigeria and other Sub-Saharan African countries are undergoing epidemiological transition. Some of the contributors of NCDs are globalization, the changing population dynamics, affluence, and the pattern of food consumption. In spite of these, there is a global apathy at curtailing the rising trend as evident by the lack of mention of NCDs in the millennium development goals. Industrialization has reduced the world into a "global village," with increase in interaction of people of difference backgrounds sharing cultural heritage, educational improvement and economic development.

Someone being overweight is a risk factor for developing Type 2 diabetes and simply weighing someone may not accurately determine if they are overweight or not. It is possible for someone who weighs 80 kg to be obese, and another person who also weighs 80 kg to be a healthy weight due their difference in height. One may be taller and considered as an average weight for their height, whereas the other is assessed as obese because they are much smaller. The association between weight and height is determined by calculating the person's Body Mass Index (BMI). Your BMI is defined by your weight in kilograms divided by your height in meters and the result is divided again by your height in meters. BMI is an indicator of how healthy a person's weight is, whether they are a healthy weight, underweight, overweight, obese, or extremely obese.

Nutritional status is the extent to which the normal food of any population group was able to meet their nutritional requirements. It is an important factor of growth and is the best indicator of the global wellbeing of children. The effectiveness with which the body utilizes the food consumed is a key basis of nutritional status. When the nutritional status of children declines, it leads to a vicious cycle of repeated sickness and growth failure. Moreover, today's children are tomorrow's world leaders and that is why nutritional assessment in the community is important for correct planning and application of intervention programmes to reduce undernutrition-associated disease and death among children, including school children. Obesity and Underweight are nutritional abnormality.

2.0   OBJECTIVES

By the end of this unit, you will be able to

- define and categorize Obesity
- explain the types of obesity
- enumerate the health risk factors of obesity
- explain how obesity affects the body
- develop knowledge of selected contemporary issues in public health, including obesity.

3.0   MAIN CONTENT

3.1   MEANING OF OBESITY

Obesity has varied definitions. Generally, overweight and obesity shows a weight greater than what is accepted as normal weight. The body requires a certain amount of body fat for storing energy, shock

absorption, heat insulation, and other functions. "Obesity is a chronic condition defined by an excess amount of body fat".

Body mass index (BMI) is best used to define obesity. A person's height and weight determines his or her body mass index. The body mass index (BMI) equals a person's weight in kilograms (kg) divided by their height in meters (m) squared. Since BMI defines body weight relative to height, it means that there is a strong association with total body fat content in adults. For instance, an adult with a BMI of 18.5-24.9 has a normal weight, one who has a BMI of 25-29.9 is overweight, and one that has a BMI over 30 is obese. A person is extremely obese (morbid obesity) if his or her BMI is over 40 (See table 1).

3.2   Classes of obesity

In adults, obesity is defined as having a BMI of 30.0 or more

3.2.1 Adult Body Mass Index (BMI)

The relationship between weight and height is determined by calculating a person's **Body Mass Index** (**BMI**). Body Mass Index (BMI) is a person's weight in kilograms divided by the square of height in meters. In simpler terms, Your BMI is defined by your weight in kilograms divided by your height in meters and the result is divided again by your height in meters. A high BMI can be an indicator of high body fatness.

BMI Calculation
Mr. Matthew weighs 73kg and his height was 2m. What is his Body Mass Index?
BMI= weight (kg) ÷ (height)^2 meters
=73÷ (2)^2
73÷ 4= 18.25kgm^{-2}
It can also be calculated thus, 73÷2= 36.5; 36.5÷2= 18.25kgm^{-2}

The following are used for adults who are at least 20 years old:
Table 1: Adult BMI classification

BMI	Class
18.5 or under	Underweight
18.5 to <25.0	"normal" weight
25.0 to <30.0	Overweight
30.0 to <35.0	class 1 obesity
35.0 to <40.0	class 2 obesity
40.0 or over	class 3 obesity (also known as morbid, extreme, or severe obesity)

Thus, obesity is subsequently subdivided into categories:
- Class 1: BMI of 30 to < 35
- Class 2: BMI of 35 to < 40
- Class 3: BMI of 40 or higher. Class 3 obesity is sometimes categorized as "morbid", "extreme" or "severe" obesity.

NB: It is possible for one person who weighs 85 kg to be obese, and another person who also weighs 85 kg to be a healthy weight. This is because of their difference in height. One may be taller and assessed as an average weight for their height, whereas the other is assessed as obese because they are much shorter. Thus being overweight/obese is relative to height of an individual

3.2.2 Childhood Obesity

For a child over 2 years old or a teen with obesity, their BMI has to be in the 95th percentile for people of their same age and biological sex:

Percentile range of BMI	Class
<5%	Underweight
5% to <85%	"normal" weight
85% to <95%	Overweight
95% or over	Obesity

3.3   Types of obesity

1. **Food Obesity**
   This type of Obesity is the most prevalent in the world, due to an excess intake of food and sugar. To lose weight one need to reduce ones eating and exercise at least 30 minutes a day
2. **Thickness due to Nervous Stomach**
   This type of thickness is caused by anxiety stress and depression. People who have a "nervous stomach" often have a habit to eat sweets. The most important thing is to control anxiety with physical activities that relieves stress.
3. **Gluten diet**
   Gluten diet is usually present in women at adolescence, menopause and those with hormonal imbalance. It is particularly important to avoid long sitting, smoking drinking alcohol, and to initiate exercise.

4. **Genetic metabolic Obesity**

People, whose stomach is often swollen like a balloon, accumulate fats in the middle of the body. This thickness affects people who consume alcohol and have trouble in breathing.

5. **Venous circulation obesity**

Thickness due to venous circulation obesity is mostly genetically inherited obesity. It occurs during pregnancy and among people who have swollen legs. Solution to this is more physical activity like regular exercises, running or climbing stairs.

6. **Inactivity Obesity**

This type of obesity affects part of the body which in the past have been very active in people who play sports. The key to eliminating this kind of fats is not to allow long periods without eating, and to move more. That way we can speed up metabolism and fats to burn faster.

3.4 Causes of Obesity

1. **Genetics**: Obesity has a strong genetic component, that is children of obese parents are much most likely to become obese than children of slim parents. That doesn't mean that obesity is completely predetermined. Food consumption can have a major effect on which genes are expressed and or not. Developing societies are increasingly becoming obese because of their new habit of eating a more Western diet. Their genes didn't change, but the situation and the indicators they sent to their genes did. Simply put, genetic components do affect your susceptibility to gaining weight, this was seen on studies on identical twins.

2. **Junk Foods Addiction**

Heavily processed foods are often little more than refined ingredients mixed with additives. These products are intended to be cheap, last long on the shelf and taste so incredibly good that they are hard to repel. By making foods as tasty as possible, food manufacturers are trying to increase sales but they also promote overeating. Living a sedentary life style and eating more calories than one burn in daily activity and exercising on a long-term, can lead to obesity. Over time, these extra calories add up and cause weight gain.

3. **Obesity associated with Insulin**

Insulin is a very important hormone that regulates energy storage, among other things. One of its functions is to store fat cells and to hold on to the fat they already carry. The foreign food we consume encourages insulin resistance in many overweight and obese individuals which elevates the insulin levels, causing energy to get stored in fat cells instead of being available for use. While insulin's role in obesity is controversial, several studies

suggest that high insulin levels have a contributory role in the increase of obesity. One of the [best ways to lower your insulin](#) is to cut down on junk food, simple or refined carbohydrates while increasing in fiber intake which leads to an immediate drop in calorie intake and effortless weight loss no calorie counting or portion control rEIuired.

4.   Old Age

Old [age](#) can lead to less muscle mass and a slower metabolic rate, making it easier to gain weight.

5.   Certain Medications

Many pharmaceutical drugs can cause weight gain as a side effect such as diabetes medication and antipsychotics, antidepressants have been linked to modest weight gain over time. These drugs don't decrease your willpower but they alter the function of your body and brain by so doing reducing your metabolic rate or increasing appetite.

6.   Inadequate sleep and rest

This can lead to hormonal changes that make you feel hungrier and desire certain high-calorie foods to calm your nerve.

7.   Leptin Resistance

Leptin is another hormone produced by fat cells and that plays an important role in obesity. This hormone increase with higher fat mass. For this reason, leptin levels are especially high in people with obesity. In healthy people, high leptin levels are associated to reduced appetite. When working properly, it should tell your brain how high your fat stores are. The problem is that leptin isn't working as it should in many people that are obese, because it cannot cross the blood-brain barrier. This condition is referred to as [leptin resistance](#) and is assumed to be a leading factor in the pathogenesis of obesity.

8.   Sugar

Excess sugar is the single worst aspect of the modern diet. That's because sugar changes the hormones and biochemistry of your body when consumed in excess. This, in turn, [contributes to weight gain](#). Added sugar is half glucose, half fructose. People get glucose from a variety of foods, including starches, but the majority of fructose comes from added sugar. Excess [fructose](#) intake may cause insulin resistance and elevated insulin levels.

9.   [Pregnancy](#)

Pregnant women gain weight and the weight gained during pregnancy may be difficult to lose and might eventually lead to obesity

10.   Misinformation

People all over the world are being [misinformed about health and nutrition](#). There are many reasons for this, but the problem largely depends on where people get their information from.

Internets for example, spread inexact or even false information about health, and nutrition. Some news outlets also oversimplify or misinterpret the results of scientific studies and the results are frequently taken out of context. Food companies also play a role by advertising products, such as weight loss supplements, that does not work to gullible consumers.

Some health conditions can also lead to weight gain and They include:
1.   **Prader-Willi syndrome**: an uncommon condition that is present at birth that causes excessive hunger in individuals.
2.   Polycystic ovary syndrome (PCOS): a condition that leads to an imbalance of female reproductive hormones.
3.   Hypothyroidism (**underactive thyroid**): This is a condition in which the thyroid gland doesn't produce enough of the hormones.
4.   Cushing syndrome**:** This a condition caused by having high cortisol levels (the stress hormone) in body system.
5.   Osteoarthritis (OA): This is the inflammation of bones, it causes pain and may lead to reduced activity resulting in weight gain and obesity

3.5   Risk Factors for Obesity

Obesity usually results from a combination of contributing factors:
1.   Hereditary factors
     Obesity tends to run in families. The genes inherited from parents may affect the amount of body fat a person stores, and where that fat is distributed. Genetics may also play a role in how effectively one's body converts food into energy, how the body regulates one's appetite and how the body burns calories during exercise. Members of the family also tend to share similar eating and activity habits, not just because of the genes they share.
2.   Lifestyle choices
•   **Unhealthy diet:** Diets high in calories, lacking in fruits and vegetables, filled with junk food, and laden with high-calorie beverages and oversized portions contributes to weight gain which can lead to obesity.
•   **Liquid calories:** People can drink many calories especially calories from alcohol without feeling full. Other high-calorie beverages, like sugared soft drinks, can contribute to significant weight gain.
•   **Inactivity:** A person with a sedentary lifestyle, can easily take in more calories every day than they burn routine daily activities, and exercises. Sedentary activities include looking at computer, tablet and phone screens, and the number of hours a person spend in front of a screen is highly linked with weight gain.

3.   Certain diseases and medications
In some people, obesity can be traced to a medical cause, such as Cushing syndrome, Prader-Willi syndrome, and other conditions. Health issues such as arthritis, also can lead to reduced activity, which may result in weight gain. Some drugs can lead to weight gain if not compensated through dieting or exercise. These medications include some antidepressants, diabetes medications, antipsychotic medications, anti-seizure medications, steroids or birth control pills, and beta blockers also known as beta-adrenergic blocking agents, are medications that reduce your blood pressure.

4.   Social and economic issues
Social and economic factors are associated to obesity. Avoiding obesity is difficult if a person doesn't have safe areas to walk or exercise. Likewise, one may not have been taught healthy ways of cooking, or have access to healthier foods. Additionally, the people a person spends time with may influence their weight- one is more likely to develop obesity if they have friends or relatives with obesity.

5.   Environment and community
The environment at school, home, and in the community can all influence how and what persons eat, and how active they are. One may be at a higher risk for obesity if one: haven't yet learned to cook healthy meals; live in a neighborhood with limited healthy food options or with many high-calorie food options, like fast-food restaurants; don't think they can afford healthier foods; and haven't found trusted source a good place to walk, play, or exercise in the neighborhood.

6.   Age
Obesity can be observed in both young and old. But as one grows older, hormones changes and a less active lifestyle increase, one is at risk of obesity. Additionally, the amount of muscle in the body tends to decrease with age. Generally, lower muscle mass results in metabolism decline. These changes also decrease calorie needs, and can make it harder to avoid excess weight. If one doesn't consciously control what they eat and become more physically active as they age, they'll likely gain weight.

7.   Pregnancy
During pregnancy, weight gain is common, and some women find this weight difficult to lose after giving birth. This weight gain may contribute to the development of obesity. Exclusive and continuous breast-feeding may be the best option to lose the weight gained during pregnancy.

8.   Quitting smoking
Quitting smoking is a better option always, but is often associated with weight gain. And for some individuals, it can lead to enough

weight gain to qualify as obesity. Often, this happens because people use food as alternative as a coping strategy with smoking withdrawal. In the long run, however, quitting smoking is still a greater benefit to your health than is continuing to smoke, and for that reason, it's imperative to focus on diet and exercise while they're quitting.

9.   **Lack of sleep**
     Lack of sleep or getting too much sleep can cause changes in hormones that increase appetite. People may also desire foods high in calories and carbohydrates, which can lead to weight gain.

10. **Stress and Depression**
     There are some external factors that affect mood and well-being which may contribute to obesity such as stress and depression. People often seek more high-calorie food when undergoing stressful situations. Depression can sometimes lead to weight gain, as some people may turn to food for emotional comfort. Certain antidepressants can also give rise to weight gain.

11.   **Microbiome**
     The gut bacteria are affected by what one eats and may contribute to weight gain or difficulty losing weight.
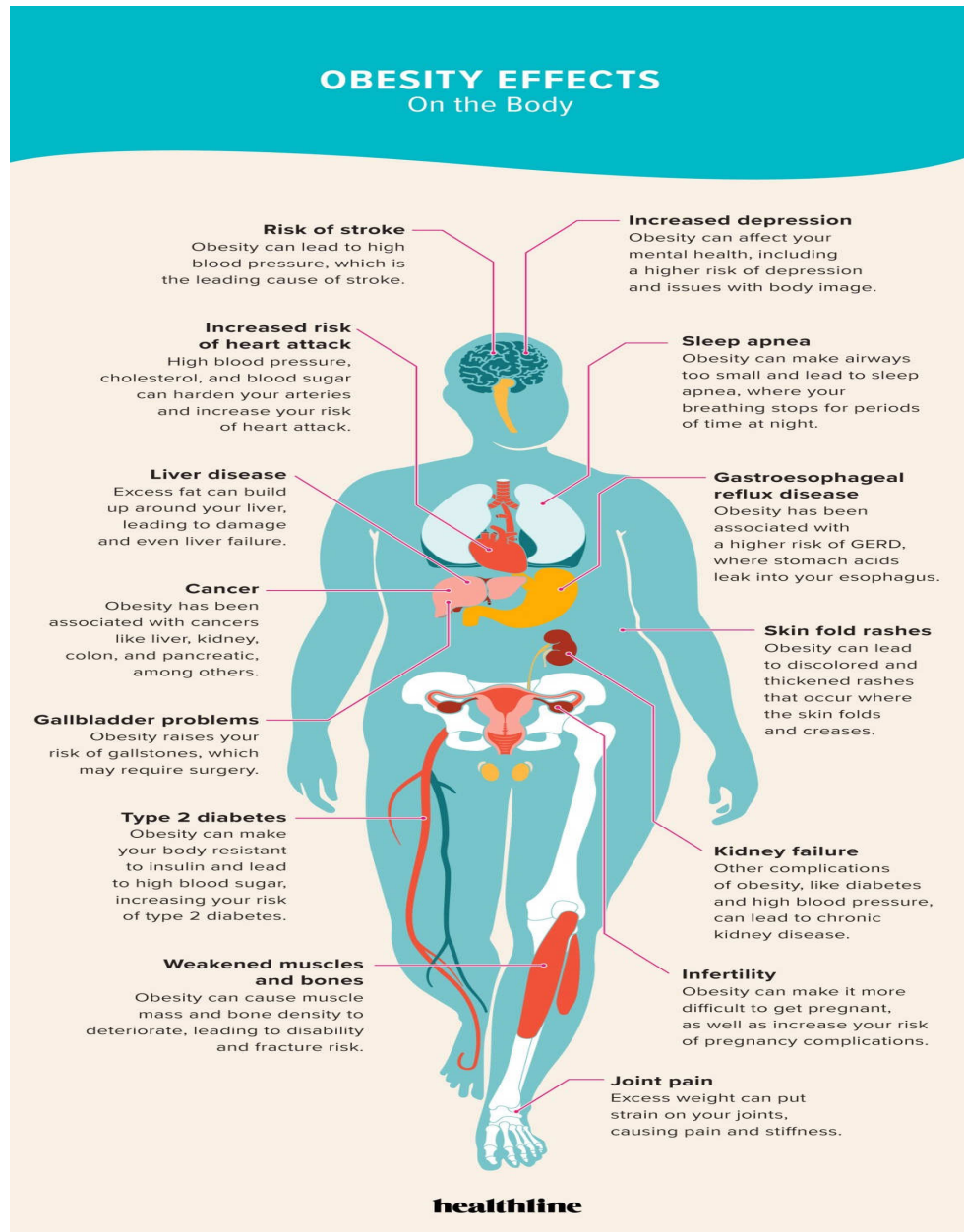
12.   **Previous attempts to lose weight**
     Former attempts of weight loss followed by rapid weight regain may contribute to more weight gain. This occurrence is sometimes called yo-yo dieting and can slow your metabolism. This is because you may overeat when you eventually become hungry.

3.6   Complications/ Health Problems Linked with Obesity

People with obesity are more likely to develop a number of potentially serious health problems, including: **Heart disease and strokes, Type 2 diabetes, Certain cancers, digestive problems,** heartburn, gallbladder disease and liver problems, **Infertility** by changing the way a woman's body stores sex hormones says the American Society for Reproductive Medicine (ASRM), **Gynecological and sexual problems** like irregular periods in women, and erectile dysfunction in men. Also **Sleep apnea-**a potentially serious disorder in which breathing repeatedly stops and starts during sleep, **Osteoarthritis, and Severe COVID-19 symptoms:** Obesity increases the risk of developing severe symptoms if you become infected with the virus that causes coronavirus disease 2019 (COVID-19). People who have serious cases of COVID-19 may require treatment in intensive care units or even oxygen to breathe. Weight bias and obesity stigma is defined as negative attitudes towards, and beliefs about, others because of their weight. These negative attitudes are shown by stereotypes and bias towards people with overweight and

obesity. Weight bias can lead to obesity stigma, which is the social sign or label an individual who is the victim of prejudice.

OBESITY EFFECTS
On the Body

Risk of stroke
Obesity can lead to high blood pressure, which is the leading cause of stroke.

Increased depression
Obesity can affect your mental health, including a higher risk of depression and issues with body image.

Increased risk of heart attack
High blood pressure, cholesterol, and blood sugar can harden your arteries and increase your risk of heart attack.

Sleep apnea
Obesity can make airways too small and lead to sleep apnea, where your breathing stops for periods of time at night.

Liver disease
Excess fat can build up around your liver, leading to damage and even liver failure.

Gastroesophageal reflux disease
Obesity has been associated with a higher risk of GERD, where stomach acids leak into your esophagus.

Cancer
Obesity has been associated with cancers like liver, kidney, colon, and pancreatic, among others.

Skin fold rashes
Obesity can lead to discolored and thickened rashes that occur where the skin folds and creases.

Gallbladder problems
Obesity raises your risk of gallstones, which may require surgery.

Type 2 diabetes
Obesity can make your body resistant to insulin and lead to high blood sugar, increasing your risk of type 2 diabetes.

Kidney failure
Other complications of obesity, like diabetes and high blood pressure, can lead to chronic kidney disease.

Weakened muscles and bones
Obesity can cause muscle mass and bone density to deteriorate, leading to disability and fracture risk.

Infertility
Obesity can make it more difficult to get pregnant, as well as increase your risk of pregnancy complications.

Joint pain
Excess weight can put strain on your joints, causing pain and stiffness.

healthline

It also involves actions against people with obesity that can cause segregation and downgrading which may lead to inequalities, for example, when people with obesity do not receive adequate health care or when they are discriminated against in the workplace or in educational settings or when children are labeled humpty dumpty.

3.6.1 How Obesity Affect the Body

People living with obesity have higher chances of developing a variety of severe health issues. These health problems affect nearly all parts of

the body, including the brain, heart, blood vessels, gallbladder, liver, bones, and joints. Below are the parts of the body affected by obesity.
The figure below shows how obesity affects the different parts of the

Body

Nervous system
Obesity greatly affects the nervous system by increasing the risk of stroke, where blood stops flowing to your brain, and also have a profound effect on mental health. This includes a higher risk of poor self-esteem, depression, and issues with body image.

Respiratory system
Fat stored around the neck can narrow the airway, which may lead to difficulty in breathing at night, which is known as sleep apnea. Breathing may actually stop for short periods in people with sleep apnea.

Digestive system
Obesity has been linked with a higher risk of gastroesophageal reflux disease (GERD), which occurs when stomach acid leaks into the esophagus, and increases the risk of developing gallstones. This is when bile builds up and hardens in the gallbladder, and may require surgery to be remedied. Fat can also build up around the liver and lead to liver damage, scar tissues, and even liver failure.

Cardiovascular and endocrine system
High blood pressure is the leading cause of stroke. In people with obesity, the heart needs to work harder to pump blood around the body. This leads to high blood pressure, or hypertension. It can also make the body's cells resistant to insulin which is a hormone that carries sugar from the blood to cells, where it's used for energy. If you're resistant to insulin, the sugar can't be taken up by the cells, resulting in high blood sugar. This increases a person's risk of having type 2 diabetes, a condition where the blood sugar is too high. Type 2 diabetes is linked to a range of other health issues, including heart disease, kidney disease, stroke, amputation, blindness, high blood pressure, high cholesterol, and high blood sugar plus excess body fat can make the blood vessels that carry blood to the heart become hard and narrow. Hardened arteries, also called atherosclerosis, can increase the risk of heart attack and stroke. Diabetes and high blood pressure are also common causes of chronic kidney disease.

Reproductive system
Unhealthy weight can make it more difficult for a woman to get pregnant. It can also increase a woman's risk of having serious complications during pregnancy.

Skeletal and muscular systems
Obesity can cause deteriorating bone density and muscle mass. This is referred to as osteosarcopenic and can lead to a higher risk of fractures, physical disability, insulin resistance, and poorer overall health outcomes. Extra weight can also put too much pressure on the joints, leading to pain and stiffness.

Integumentary (skin) system
Skin of body fat folds can lead to rashes. A condition known as acanthosis nigricans can also occur. Acanthosis nigricans is characterized by discoloration and thickening of the skin in the folds and creases of your body.

Other effects on the body
Obesity has been linked with an increased risk of many different types of cancers, including endometrial, liver, kidney, cervical, colon, esophageal, and pancreatic cancer, among others. As BMI increases, so does the risk of developing cancer.

3.7   Prevention, Diagnosis and Treatment

3.7.1 Prevention of Obesity

The steps to prevent weight gain are the same as the steps to lose weight. Whether you're at risk of obesity or currently overweight or at a healthy weight, you can take steps to prevent unhealthy weight gain and health related problems.

- **Exercise regularly:** 150 to 300 minutes of moderate-intensity activity a week, moderately intense physical activities include fast walking and swimming can prevent weight gain.
- **Have a healthy planned food menu:** Avoiding saturated fat and limit sweets and alcohol, and focusing on low-calorie, nutrient-dense foods, such as fruits, vegetables and whole grains. Eat three regular meals a day with limited snacking. Just be sure to choose foods that promote a healthy weight and good health most of the time.
- **Know and avoid the food traps that cause you to eat:** Identify situations that trigger out-of-control eating. Try keeping a jotter and write down what you eat, how much you eat, when you eat,

how you're feeling and how hungry you are. After a while, you should see patterns emerge. You can plan ahead and develop strategies for handling these types of situations and stay in control of your eating habits.

- **Monitor your weight regularly:** People who weigh themselves at least once a week are more successful in keeping off excess pounds. Monitoring your weight can tell you whether your efforts are working and can help you detect small weight gains before they become big problems.
- **Be consistent:** Sticking to your healthy-weight plan during the week, on the weekends, and amidst vacation and holidays as much as possible increases your chances of long-term success.
- **Integration of Services and Partnerships of other agencies**: There's been a dramatic increase in obesity and in obesity-related diseases in the last couple decades. This is the reason why communities, states, and the federal government are putting an emphasis on healthier food choices and activities to help turn the tide on obesity. For example, food processing industries, town planning authorities etc., adequate budgetary allocation to health by all relevant stake holders for research and development on communicable diseases, and continuous surveillance on prevalence of non-communicable diseases.

3.7.2 Diagnosis of Obesity

BMI is a rough calculation of a person's weight in relation to their height, and other more accurate measures of body fat and body fat distribution include: Skinfold thickness tests, blood tests to examine cholesterol and glucose levels, liver function tests, waist-to-hip comparisons, screening tests, such as ultrasounds, CT scans, and MRI scans, a diabetes screening, thyroid tests, heart tests, such as an electrocardiogram (ECG or EKG).

3.7.3 Treatment of Obesity
Lifestyle and behavioral changes can help with weight loss
1. Healthcare team can educate individuals and you on food choices and help develop a healthy eating plan that works for them. A structured exercise program and increased daily activity — up to 300 minutes a week — will help build up strength, endurance, and metabolism.
2. Counseling or support groups may also identify unhealthy triggers and help individuals cope with any anxiety, depression, or emotional eating issues.
3. Lifestyle and behavioral changes are the preferred weight loss methods for children, unless they're extremely overweight. Your doctor may also prescribe certain prescription weight loss

medications in addition to eating and exercise plans. Medications are usually prescribed only if other methods of weight loss haven't worked and if an individual have a BMI of 27.0 or more in addition to obesity-related health issues.

4.   Weight loss surgery: Weight loss surgery is commonly called bariatric surgery. This type of surgery works by limiting how much food you can comfortably eat or by preventing your body from absorbing food and calories. Sometimes it can do both. Weight loss surgery isn't a quick fix. It's a major surgery and can have serious risks. Afterward, people who undergo surgery will need to change how they eat and how much they eat, or they risk getting sick. However, nonsurgical options aren't always effective at helping people with obesity lose weight and reduce their risk for comorbidities.

Types of weight loss surgery
- **Gastric bypass surgery.** In this procedure, your surgeon creates a small pouch at the top of your stomach that connects directly to your small intestine. Food and liquids go through the pouch and into the intestine, bypassing most of the stomach. It's also known as Rouxen-Y gastric bypass (RYGB) surgery.
- **Laparoscopic adjustable gastric banding (LAGB).** LAGB separates your stomach into two pouches using a band.
- **Gastric sleeve surgery.** This procedure removes part of your stomach.
- **Biliopancreatic diversion with duodenal switch.** This procedure removes most of your stomach.

However, in 2018 guidelines, the American Society for Metabolic and Bariatric Surgery (ASMBS) endorsed weight loss surgery for adults with BMIs of 30.0 up to 35.0 (class 1) who:
- have related comorbidities, especially type 2 diabetes
- haven't seen sustained results from nonsurgical treatments, such as eating and lifestyle modifications

For individuals with class 1 obesity, surgery is most effective for those between the ages of 18 and 65 years old. People will often have to lose some weight before undergoing surgery. Additionally, they'll normally undergo counseling to ensure that they're both emotionally prepared for the surgery and willing to make the necessary lifestyle changes that it'll required. Only a few surgical centers in the United States perform these types of procedures on children under 18 years old.

SELF-ASSESSMENT EXERCISE

i.   What is obesity
ii.   Types of obesity
iii.   Enumerate the classes of obesity
iv.   What are the risk factors associated with obesity?
v.   How can Obesity be prevented?
vi.   How does obesity affect the normal functioning of the body?
vii.   Explain how it is possible for one person who weighs 80 kg to be obese, and another person who also weighs 80 kg to be a healthy weight.
viii. Assuming your weight is 75kg, and your height is 2meters, what is your BMI, categorize the answer.

4.0   CONCLUSION

In this unit you have recognized that increase in overweight and obesity are not only problems of individuals, but also problems of entire populations. In recognition of this fact will require multifaceted, population-based changes in the social and environmental variables that influence food consumption and expenditure.

5.0   SUMMARY

In this unit, you have learnt that Obesity is a serious non-communicable disease and a nutritional abnormality because it is associated with poor health outcomes and reduced quality of life. Obesity is also associated with the leading causes of death in the world, including diabetes, stroke, heart disease, and some examples of cancer. Strong food cravings or addiction, some medications, high insulin levels and insulin resistance are linked to the development of obesity. Obesity is affects all ages and tribe. It needs to be tackled using a perfect blend of physical activity and a very carefully planned diet. You are encouraged to increase your understanding of this unit by looking through the links and further readings.

6.0   TUTOR-MARKED ASSIGNMENT

1) Mr. Ahmed is 1.70 m tall and weighs 68 kg while Mr. Abiodun is also 1.70 m tall but weighs 93 kg. Estimate their BMI. What does the BMI of each man indicate about the risk of developing Type 2 diabetes?

7.0   REFERENCES/FURTHER READING

Balentine, J.R., (2019). "Obesity Facts". Medical Editor: Melissa Conrad Stöppler, MD. https://www.medicinenet.com/obesity _weight _loss/article.htm   Accessed 16th March 2021

Cafasso, J., (2020). "How does obesity affect the body?" Medically reviewed by Saurabh Sethi, M.D., MPH.https://www. healthline.com/health/obesity/how-obesity-affects-body Accessed 16th March 2021

Centre for disease Control and Prevention (2018). "Adult obesity facts".https://www.cdc.gov/obesity/data/adult.html   Accessed 16th March 2021

Flegal, K.M. &Graubard, B.I., (2009). "Estimates of excess deaths associated with body mass index and other anthropometric variables". The *American Journal* of *Clinical Nutrition,* 89(4), pp.1213–1219.

Freedman, D.S., Horlick, M. & Berenson, G.S., (2013). "A comparison of the Slaughter skinfold-thickness EIuations and BMI in predicting body fatness and cardiovascular disease risk factor levels in children". *The American Journal* of *Clinical Nutrition,* 98(6), pp.1417–24.

Lawlor, D. A., Benfield, L., Logue, J., Tilling, K., Howe, L. D., Fraser, A., Cherry, L., Watt, P., Ness, A. R., Davey Smith, G., &Sattar, N. (2010). "Association between general and central adiposity in childhood, and change in these, with cardiovascular risk factors in adolescence: prospective cohort study". *BMJ (Clinical research ed.)*, *341*, c6224. https://doi.org/10.1136/bmj.c6224

National Institute of Diabetes, and Digestive and Kidney Diseases. "Health risks of being overweight".*https:// www.niddk. nih.gov/health-information/ weight-management /health-risks-overweight NIH Accessed 16th March, 2021*

Ogunlade, O., &Asafa, M.A., (2015)."Pattern and Prevalence of Underweight, Overweight and Obesity Among Young Adult Nigerians", *American Journal of Biomedical and Life Sciences*. 3 (2): 12-15. doi: 10.11648/j.ajbls.20150302.11

Warnock, A. L., Dooyema, C., Blanck, H. M., Lee, S. H., Hall, K., Geary, N., &Galuska, D. A. (2021). "A Healthy Start: National Trends in Child Care Regulations and Uptake of Obesity

Prevention Standards (2010-2018)". *Childhood obesity (Print)*, 10.1089/chi.2020.0298. Advance online publication. https://doi.org/10.1089/chi.2020.0298

Wohlfahrt-Veje, C., Tinggaard, J., Winther, K., Mouritsen, A., Hagen, C. P., Mieritz, M. G., de Renzy-Martin, K. T., Boas, M., Petersen, J. H., & Main, K. M. (2014). "Body fat throughout childhood in 2647 healthy Danish children: agreement of BMI, waist circumference, skinfolds with dual X-ray absorptiometry". *European journal of clinical nutrition*, *68*(6), 664–670. https://doi.org/ 10.1038/ ejcn.2013.282.

World health Organization (2014).**"**Global status report on non-communicable diseases 2014". **https://www.who. int/nmh/ publications/ncd-status-report-2014/en/** Accessed 16th march 2021

Science direct, "A History of Public Health". **https://www.sciencedirect. com/topics/medicine-and-dentistry/history-of-public-health**

UNIT 2   UNDERWEIGHT

CONTENTS

1.0   INTRODUCTION

Malnutrition is an important public health issue particularly for developing countries like Nigeria. Weight-for-height, height-for-age and weight-for-age are three important parameters for assessing nutritional status in children. Malnutrition is estimated to contribute directly or indirectly to more than 33% of all child deaths globally. Wasting implies that children are too thin for height, stunting indicates that children are too short for age while underweight means children are too thin for age. Wasting is usually below 5% in poor countries and prevalence of stunting is between 5%-65%. According to the recent National Demographic and Health Survey (NDHS) in Nigeria, 37% of children under-five are stunted, 18% are wasted and 29% are underweight (NDHS, 2014). In south east Nigeria, marasmus is the most common form of protein energy malnutrition (PEM). The prevalence of stunting, wasting and underweight among under five in Anambra state (South eastern Nigeria) were 15.1%, 18.1% and 10.4% respectively. Several factors have been associated with malnutrition. Age, sex, parity, location of residence Parental education, economic and nutritional characteristics, child feeding practices, were important risk factors to severe underweight in children in developing countries. In Nigeria, a 10-year retrospective study in south east revealed that male children are more likely to be malnourished than female. Low level of education especially among women is a strong factor of among malnutrition. The current national demographic and health survey in Nigeria shows that stunting is most common among children of less educated mothers (50%) and those from the poorest households (54%).

Worldwide, among adults, 8.8% of men and 9.7% of women are underweight (Body Mass Index=BMI 18.5kg/m²). In Nigeria 14.1% were underweight. Being underweight in adulthood can have serious various negative health effects. Factors associated with underweight in adulthood may include younger or older age, poor socioeconomic status, rural residence, male sex, health risk behaviours, such as insufficient food intake, smoking, and anxiety of being obese. Several low and middle-income countries are now facing a 'double burden' of undernutrition and obesity. WHO contends that it is not uncommon to find undernutrition and obesity existing within the same country, the same community and the same household. While warnings about health consequences of excess weight abound less attention appears to be paid to the simultaneous study of the double burden of underweight.

Both underweight and overweight leads to adverse health outcomes. The World Health Organization targets to halt NCD by 2025. The rise in the prevalence of obesity at it was 2010 level have been driven largely by concerns about the health and economic burden of increasing body mass index (BMI). It should also be noted that being underweight is also associated with increased risk of morbidity and mortality and with adverse pregnancy outcomes. There is a realization that there are very few analyses of trends in underweight. In order to prevent further spread of NCDs in the general population, it is imperative that their prevalence, change over time and their common risk factors which are measurable and amenable to intervention be identified. In developing countries, malnutrition and undernutrition are common despite the relative economic growth observed. It can disrupt children's cognitive development and lead some to poor academic performance. 200 million children worldwide are affected by malnutrition including more than 20 million severe and acute malnutrition in developing countries. In sub-Saharan Africa, various socio-economic factors have been associated with children's nutritional status, such as maternal and paternal education, parental income, and family assets. In 2016, chronic malnutrition affected approximatively 154.8 million children under-five worldwide of which 90% occurred in Africa and Asia. In addition, 20 million children suffer from severe acute malnutrition, most of whom live in South Asia and Sub-Saharan Africa. Data on the nutritional status of school age children at the national level in developing countries are seldom available.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- explain the meaning of underweight
- enumerate the causes of underweight
- discuss the risk factors associated with underweight

- explain the treatments for underweight.

3.0   MAIN CONTENT

3.1   Meaning of Underweight

Underweight and overweight have the same health concerns to an individual. An underweight individual may not be getting the adequate nutrients it needs to build healthy bones, skin, and hair. While some people due to their genetic background or a medical illness may not put on weight, there are interventions to help a person gain weight. The Centers for Disease Control and Prevention (CDC) recommend people use a body mass index (BMI) to calculate if they are underweight, at a healthy weight, or overweight/obese.

3.1.1 Adult underweight

If a person's BMI is under 18.5, then they are underweight. The commonest way of knowing someone's weight is using the BMI because it compares their weight to their height.
Ranges for Adult BMI include:

- Underweight: less than 18.5
- Normal/healthy weight: 18.5 to 24.9
- Overweight: 25.0 to 29.9
- Obese: 30 or higher

For a person who is an elite or endurance athlete whose body has a significant amount of muscle, these calculations may be slightly inaccurate. This is because muscle weighs more than fat.

3.1.2 Childhood Underweight

For a doctor to diagnose a child over 2 years old or a teen with underweight, their BMI has to be less than 5th percentile for people of their same age and biological sex:

Percentile range of BMI	Class
<5%	Underweight
5% to <85%	"normal" weight
85% to <95%	Overweight

| 95% or over | Obesity |

3.2   Causes of Being Underweight

There are a various reasons why a person may be underweight. Sometimes, multiple underlying causes may be related. Causes of being underweight include:

1.   **A high metabolism:** Individuals with high metabolic rates may not gain much weight even when eating high-energy foods.
2.   **Genetic factor:** Some people have a naturally low BMI due to physical characteristics that run in their family.
3.   **Regular physical activity:** Athletes or persons that engage in high levels of physical activity, such as runners, may burn significant amounts of calories leading to low body weight.
4.   **Mental illness:** Poor mental health can affect one's ability to eat, including depression, anxiety, obsessive-compulsive disorder (OCD), and eating disorders, such as anorexia, and bulimia. These conditions can affect a person's body appetite and image.
5.   **Diseases:** Some disease types can cause regular nausea, vomiting, and severe diarrhea, leading to weight loss. Other conditions may cause reduction of one's appetite, so they do not feel like eating. Examples are malaria, HIV/AIDS, cancer, thyroid disorders, diabetes, and digestive conditions, such as Crohn's disease or ulcerative colitis.

3.3   Risk Factors

Some risk factors associated with underweight are:
1.   **Skin, hair, or teeth problems:** Person that do not get enough nutrients in their daily diet, may display physical symptoms, such as hair loss, thinning skin, dry skin, or poor dental health.
2.   **Osteoporosis:** In women, underweight increases the risk of osteoporosis, which is where the bones are fragile and more prone to breaking.
3.   **Frequent illness:** Inadequate nutrients from diets can lead to lowered energy for maintaining a healthy body weight, and enough nutrients to fight off infections, and as a result, a person may likely get sick more frequently, with common illnesses, such as a cold, can last longer than they usually would.
4.   **Always tired:** Not getting enough calories to maintain a healthy weight can make a person feel fatigued. Calories are a measurement of the energy a particular food can give a person.

5. **Irregular menstrual periods:** Women who are underweight may not have regular periods, or an adolescent's first period may be delayed or absent which may lead to infertility.
6. **Anemia.** A person who is underweight is more likely to have low blood counts, known as anemia, which causes headaches, dizziness, and fatigue.
7. **Premature births.** A pregnant woman who is underweight is at a higher risk for pre-term labor, which means having a baby before 37 weeks.
8. **Slow or impaired growth.** Nutrients are essential for growth and development of healthy bones among young people. Being underweight and not getting enough calories could slow a person's growth rate. Doctors call this a 'failure to thrive.'
9. **Delayed Wound Healing:** Being underweight is associated with an increased risk for mortality and it also impairs healing processes following an accident or trauma when compared to an individual with an average BMI.

3.4   Prevention and Treatment

1. High-protein and whole-grain carbohydrate snacks can help a person gain weight. Examples include peanut butter crackers, protein bars, trail mix, pita chips and hummus, or a handful of almonds.
2. A person can eat several small meals throughout the day.
3. A person can add calorie-dense food sources to their existing diet, such as putting slivered almonds on top of cereal or yogurt, sunflower or chia seeds on a salad or soup, or nut butter on whole-grain toast.
4. Avoid constant rigorous exercise
5. Regular medical check-up

SELF-ASSESSMENT EXERCISE

1. When is a person said to be underweight?
2. What are the BMI ranges of?
   i. Underweight
   ii. Normal/healthy weight
   iii. Overweight
   iv. Obese
3. Causes of underweight
4. Risk factors associated with underweight

4.0 CONCLUSION

In this unit you were provided with information on meaning, causes, risk factors, and prevention of underweight occurs in children and adults. More information is made available for further reading and understanding, in the links provided.

5.0 SUMMARY

In this unit you have learnt that underweight is more in less developed countries, and having underweight in children and adults can have various negative health effects. However, underweight can be prevented and treated with proper dietary intake. Efforts should be put in place to curb the menace by all.

6.0 TUTOR-MARKED ASSIGNMENT

1. How do we prevent/treat underweight?

REFERENCES/FURTHER READING

Abdoulaye, T., Kadio, K., Olivier, J.J., Alioune, C., Sidikiba, S., Alexandre, D., Emmanuel, K.Y., Koolo, B.I., Sory, D.I., Falaye, T., Bangaly, M.F., Nagham, K., Diao,C., Laurent, A.A., Cecile, C., Francois, E.J.,&Pathe, D.M., (2016). "Prevalence and Determinants of Malnutrition Among Schoolchildren in Primary Schools in the Communes of Dixinn, Matam and Matoto, Conakry, Guinea, 2016". *Central African Journal of Public Health*, 4, (2): 38-47. https://doi.org/10.11648/j.cajph.20180402.12

Akinsola, H.A., Ezeruigbo, C., Kyei, K.A., Anyanwu, F.C., &Nemakhavhani, R., (2018). "Socio-demographic determinants of body mass index among school children in Ebonyi State, Nigeria". *African Journal of Primary Health Care & Family Medicine*10(1), a1450. https:// doi.org/10.4102/phcfm. v10i1.1450

Andy, E., Nwachukwu, O. J., Oyedele E. A., Gotodok, K. H., &Kumzhi R. P., (2016). "Malnutrition and associated factors among under-five in a Nigeria local government area". *International Journal of Contemporary Medical Research* 3(6):1766-1768.

Letamo G., (2020). "Dual burden of underweight and overweight/obesity among adults in Botswana: prevalence, trends and sociodemographic correlates: a cross-sectional survey". *BMJ Open*;10:e038614. https://doi.org/10.1136/bmjopen-2020-038614

Little, M., Humphries, S., Patel, K., & Dewey, C. (2016). "Factors associated with BMI, underweight, overweight, and obesity among adults in a population of rural south India: a cross-sectional study". *BMC obesity*, *3*, 12. https://doi.org/10.1186/s40608-016-0091-7

Pengpid,S..&Peltzer, K., (2020). "The prevalence and associated factors of underweight and overweight/obesity among adults in Kenya: evidence from a national cross-sectional community survey". *Pan African Medical Journal. 2020; 36:338.* *https://doi.org/10.11604/pamj.2020.36.338.21215*

Schwinger, C., Chandyo, R.K., Ulak, M., Hysing, M., Shrestha, M., Ranjitkar, S., & Strand, T.A., (2020). "Prevalence of Underweight, Overweight, and Obesity in Adults in Bhaktapur, Nepal in 2015–2017". *Frontiers in Nutrition* 7:567164. https://doi.org/10.3389/fnut.2020.567164

UNIT 3   CONTROLLING NON COMMUNICABLE DISEASES IN NIGERIA

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
        3.1   Prevention and control of Non-Communicable Diseases
        3.2   Barriers in Prevention of NCDs
        3.2   National Strategic Plan of Action on NCDs
        3.3   Roles of Several Stakeholders in Implementing this Strategic Plan of Action National Strategic Plan of Action on NCDs
                3.4.1   The Role of the Federal Government
                3.4.2   The Role of State Government
                3.4.3   The Role of the Local Governments
                3.4.4   The Role of the Private Sector
                3.4.5   The Role of Civil Society Organizations
                3.4.6   The Roles of Professional Bodies
                3.4.7   The Roles of Traditional, Religious and Opinion Leaders
                3.4.8   Roles of Media Organisations
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Non communicable diseases (NCDs), including diabetes, stroke, heart disease, cancer, and chronic lung disease, are collectively responsible for almost 70% of all deaths globally. Nearly three quarters of all NCD deaths, and 82% of the 16 million people who died prematurely, or before reaching 70 years of age, occur in low- and middle-income countries. The rise of NCDs has been driven by primarily four major risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

• enumerate the prevention and control of Non-Communicable Diseases
• National Strategic Plan of Action on NCDs

- major barriers in the prevention of NCDs
- roles of Several Stakeholders in Implementing this Strategic Plan of Action National Strategic Plan of Action on NCDs.

3.0   MAIN CONTENT

3.1   Prevention and Control of Chronic Non-Communicable Diseases

1.   Integration of Services and Partnerships: Collaborative efforts by all relevant stakeholders (government, religious organizations, donor agencies, civil society organizations) to prevent NCD.
2.   Financing: Adequate budgetary allocation by families and all levels of government to health
3.   Research and Development: continuous research by the academics on causes, prevalence and prevention of NCD.
4.   Surveillance: systematic observation of occurrences of NCD in our environment
5.   Monitoring and Evaluation Framework: There will be formal evaluation of the NCD control programme periodically. The evaluation may be undertaken as a stand-alone exercise or as part of the annual independent health sector review. A set of indicators will be developed and reviewed to guide a comprehensive assessment of NCD interventions.

Efforts to reduce the burden of NCDs National Strategic Plan of Action on NCDs
Concerted efforts have been made by the Federal Ministry of Health since 1988 to lessen the problem of NCDs in Nigeria. The Non-Communicable Disease Control Programme, now a Division, was established in 1989 with the instruction to serve as the authority to the response to NCDs in Nigeria. This was followed soon by the establishment of an expert committee on NCDs to guide and advise the government on the putting into practice of policies and programmes for the prevention and control of NCDs. Besides, a national survey on NCDs was carried out in 1990-1992 to determine the prevalence of major NCDs in Nigeria, their risk factors and health factors. Documents for health professionals on management of NCDs and health education materials were also established. Efforts to integrate NCDs into the Primary Health Care (PHC) have also been made but with marginal success. Some activities like the annual remembrance of NCDs related Global Days with an extensive range of activities such as press briefing, awareness campaign rallies, press briefing, sensitization workshops/seminars for the school children, and the general public etc. have contributed significantly to awareness creation on NCDs and their risk factors among the populace. More steps have so far been taken to

add a push to the already existing efforts for the prevention and control of NCDs in Nigeria following the political declaration of the high level meeting of the 66th UN General Assembly on Prevention and Control of NCDs in September 2011. Which include the following:

- Approval for the establishment of a national task force on NCDs prevention and control to replace the existing expert committee on NCDs which was established in 1989. The task force members, unlike the expert committee, will not only comprise of experts on NCDs but stakeholders from other sectors.

- Flagging off of the National Stroke Prevention Programme in October 2013 by the former President of Nigeria. The programme is aimed at inspiring Nigerians to live healthy and to frequently carry out medical check-ups in order to reduce the risk of having stroke.

- Intensified efforts to effectively control tobacco in Nigeria in line with the WHO FCTC by the Federal Ministry of Health and stakeholders. This capped by signing of the National Tobacco Control Bill into law on 26th May, 2015 by the former President. Prior to this, the Global Adult Tobacco Survey (GATS) was successfully carried out in Nigeria in 2012 and the report was released in 2013 making Nigeria the first country in sub-Sahara Africa to successfully conduct GATS.

- Development of the National Nutrition Guideline on Prevention and Control of NCDs and the National Guideline for the Control and Management of SCD which were subsequently approved by the 56th National Council on Health (the highest decision making body on health related matters in Nigeria) in August 2013.

- Domestication of WHO Mental Health Gap Action Programme (MHGAP) and finalization of Mental Health Policy and Legislation.

- Instituting of six (6) Sickle Cell Disease centers in Federal Medical Centres in the 6 geopolitical zones in the country between 2011 and 2012.

3.2   Introduction to This Strategic Plan

The prevention and control of non-communicable diseases (NCDs) is not the responsibility of the health system alone. It involves a whole of society and a multisectoral approach is vital to solve NCDs problems. Therefore, there is need to involve all relevant stakeholders such as the Ministries of Information and national orientation agencies, Transport, Urban Planning, Finance, Agriculture, Education, National Sports Commission as well as the civil society organizations. This document was provided for government and all relevant stakeholders as framework for designing and implementing programmes and

interventions that will address NCDs outside the health sector. It will be a period of five years (2016 - 2020).

Vision
A healthy Nigerian population with reduced burden of NCDs and enhanced quality of life for socio-economic development.

Mission
To promote healthy lifestyle in Nigeria and provide a framework for strengthening the health care system using a multisectoral approach for the prevention and control of NCDs.

Overarching principles
- Human right approach where everyone participates
- Equity where resources are evenly distributed based on need
- Multisectoral approach involving relevant stake holders
- Partnership with other organizations
- Universal coverage of health services
- Life-course approach that is systematic
- Evidence-based measures from research recommendations

3.3   Some major barriers to the prevention and control of NCDs in Nigeria

Nigeria has been faced with major barriers in tackling NCDs over the years. Such as a weak health system; inadequate funding of NCD related programme and activities; and poor legislation and enforcement of laws linked to the prevention and control of NCDs. The best way to remove these barriers is by adopting an integrated and multisectoral approach involving government and relevant groups.

3.4   Roles of Several Stakeholders in Implementing this Strategic Plan of Action National Strategic Plan of Action on NCDs

3.4.1 The Role of the Federal Government

The Federal Ministry of Health shall:
1. Coordinate implementation of this plan of action
2. Establish a multispectral national task force with representation from relevant stakeholders for NCDs prevention and control
3. Provide adequate budgetary allocation for the NCDs prevention and control at the national level
4. Facilitate and support capacity building at all levels for the implementation of this plan of action

5.   Facilitate advocacy and social mobilization at all levels for the prevention and control of NCDs
6.   Set standard, provide indicators and develop guidelines for prevention and control of NCDs in collaboration with other relevant agencies
7.   FMOH shall adopt the community based health planning services system as the National model for Community Health Care in collaboration with National Primary Health Care Development Agency (NPHCDA), State Ministry of Health (SMOH), Local Government Health Department (LGHD) and communities to integrate NCDs control into Primary Health Care (PHC) services with community plans according to local need with a view to ensuring community ownership
8.   Expand access to essential medicines, basic technologies, consumables and services for the prevention and control of NCDs
9.   Promote local and international partnerships in control and prevention of NCDs
10.   Facilitate research on the prevention and control of NCDs
11.   Maintain a data base for NCDs including integration with integrated disease surveillance and response (IDSR)
12.   Conduct supervision, monitoring and evaluation of NCDs programmes at all levels.

The National Primary Health Care Development Agency (NPHCDA) shall:
1.   Partner with the NCDs Division at the FMOH in the integration of NCDs into the PHC system
2.   Assist in the collection and collation of NCDs surveillance data in the LGA
3.   Assist in the mobilization of the community for NCDs control activities
4.   Assist in the training and supervision of LGA staff.

3.4.2 The Role of State Government

State Government shall: State Strategic Plan of Action on NCDs
1.   Through its Ministry of Health with a designated focal point be responsible for the coordination of NCDs prevention and control
2.   Provide a budgetary line and allocate adequate resources to support NCDs prevention and control
3.   Facilitate and support capacity building at state and local government levels for the implementation of this plan of action
4.   Facilitate advocacy and social mobilization at state and local government levels for the prevention and control of NCDs

5.   Ensure access to essential medicines, basic technologies, consumables and services for the prevention and control of NCDs at state and local government levels
6.   Ensure effective linkages and referrals between Primary Health Care and higher levels of care
7.   Promote appropriate partnerships in consultation with the Federal Ministry of Health to prevent and control NCD
8.   Ensure data management on NCDs including integration with integrated disease surveillance and response (IDSR)
9.   Provide effective implementation, supervision, monitoring and evaluation of this plan of action at state and LGA levels.

3.4.3 The Role of the Local Governments

Local Government Areas (LGAs) shall:
1.   Ensure through its health department with a designated focal point, the coordination of NCDs prevention and control
2.   Provide a budgetary line and allocate adequate resources to support NCDs prevention and control
3.   Facilitate and support capacity building and provide adequate human resources at Primary Health Care level for the implementation of this plan
4.   Facilitate advocacy and social mobilization at community level for the prevention and control of NCDs
5.   Ensure access to essential medicines basic technologies consumables and services for the prevention and control of NCDs at Primary Health Care level
6.   Ensure effective linkages and referrals between PHC and higher levels of care
7.   Support data collection on NCDs including IDSR
8.   Provide effective implementation, supervision, monitoring and evaluation of this policy at Primary Health Care level.
     Development partners shall:
1.   Provide technical, financial and infrastructural support to governments at all levels in capacity building, advocacy, social mobilization and service delivery for the successful implementation of this plan of action in consultation with the FMOH
2.   Support research on NCDs at all levels of health care
3.   Support monitoring and evaluation of NCDs programmes at all levels of health care.

3.4.4 The Role of the Private Sector

Private sector shall:
1.   Support for the effective implementation of this policy

2.   Partner with relevant stakeholders including public-private partnership in the implementation of this policy
3.   Comply with laid down government guidelines and regulations regarding NCDs prevention and control
4.   Transmit relevant data generated from their facilities to the LGA Health Department
5.   Support resource mobilization for the implementation of this policy.

3.4.5 The Role of Civil Society Organisations

Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs) and Faith Based Organizations (FBOs), shall support awareness creation, community mobilization, advocacy, capacity building and resource mobilization for NCDs prevention and control.

3.4.6 The Roles of Professional Bodies

The professional bodies shall:
1.   Sensitize and mobilize their members for effective implementation of this plan of action
2.   Participate in capacity building activities involved in the implementation of this plan
3.   Support advocacy and community mobilization
4.   Support and participate in research.

3.4.7 The Roles of Traditional, Religious and Opinion Leaders

1.   Traditional, religious and opinion leaders shall:
2.   Support and facilitate effective implementation of this plan of action
3.   Sensitize and mobilize their subjects and members for effective implementation of this policy.

3.4.8 Roles of Media Organizations

Media organizations and practitioners of journalism shall: National Strategic Plan of Action on NCDs

1.   Engage in advocacy and community mobilization
2.   Sensitize and mobilize their members for effective implementation of this plan of action
3.   Disseminate information to the public on NCDs prevention and control at all levels.

Scope

This strategic plan of action has been developed in respect of the huge contribution of non-communicable diseases (NCDs) to the burden of disease in Nigeria and it is in line with the Global Action Plan (GAP) on Prevention and Control of NCDs 2013 – 2020. It is an updated and modified version of the first National Policy and Strategic Plan of Action on NCDs approved by the National Council on Health (NCH) in 2013. The document will serve as a blue print to guide the implementation of evidence-based strategies and internationally agreed targets for the prevention and control of NCDs.

The strategic plan of action adopts a joined approach to tackling the four major NCDs namely: cancer, cardiovascular diseases, chronic respiratory diseases and diabetes rather than focusing on the single diseases. This is mainly because these NCDs share similar modifiable risk factors (unhealthy diet, tobacco use, physical inactivity and harmful use of alcohol) and therefore an integrated approach is more cost effective than individual diseases approach. Also in addition to the four major NCDs, sickle cell disease (NCD) is another major NCD that is given priority in this plan of action as Nigeria has the highest burden of SCD in the globe.

The National Strategic Plan of Action on NCDs also took into account the following:

a. **International Resolutions and Declarations**:
i. WHO Framework Convention on Tobacco Control (WHO FCTC) (resolution WHA56.1)
ii. Global strategy on diet, physical activity and health (resolution WHA57.17)
iii. Global strategy to reduce the harmful use of alcohol (resolution WHA63.13)
iv. The Brazzaville declaration on non-communicable diseases prevention and control in the WHO African region 2011
v. Moscow declaration at the first ministerial conference on healthy lifestyles and NCD control 2011
vi. Political declaration of the high-level meeting of the General Assembly on the prevention and control of non-communicable diseases: A/RES/66/2(2011)
b. **Existing National Policies and Strategic Plans**:
i. National Strategic Health Development Plan (NSHDP) 2010 – 2015
ii. National Health Act (NHA)
iii. National Tobacco Control Act (NTCA).

National NCD targets for 2025

The following National NCD targets were adapted from the Global NCD targets:

1. **Premature mortality from NCDs:** 25% relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.
2. **Tobacco:** 30% relative reduction in prevalence of current tobacco use
3. **Alcohol:** 10% relative reduction in overall alcohol consumption (including hazardous and harmful drinking).
4. **Physical inactivity:** 10% relative reduction in prevalence of insufficient physical activity.
5. **Dietary salt intake:** 30% relative reduction in mean adult (aged ≥18) population intake of salt, with aim of achieving recommended level of <5g per day.
6. **Raised Blood Pressure:** 25% relative reduction in Raised blood pressure prevalence of raised blood pressure.
7. **Diabetes, Obesity and Sickle Cell Disease:** Halt the rise in the prevalence of diabetes, obesity and sickle cell disease.
8. **Drug therapy to prevent heart attacks and strokes:** 50% of eligible people receive drug therapy to prevent heart attacks and strokes, and counseling.
9. **Essential NCD medicines and basic technologies to detect and treat major NCDs:** 80% availability of basic technologies and generic essential medicines required to treat major NCDs in both public and private facilities.

SELF-ASSESSMENT EXERCISE

1. Enumerate the prevention and control of Non-Communicable Diseases.
2. What are the major barriers in the prevention of NCDs?

4.0   CONCLUSION

In this unit, you have information on the control of Non-Communicable Diseases (NCDs) in Nigeria, barriers in the prevention of NCD, and roles of various stakeholders in implementing the strategic plan of action on NCD.

5.0   SUMMARY

In this unit, you have read on the introduction to the strategic plan in the control of Non-Communicable Diseases (NCDs) in Nigeria, barriers in

the prevention of NCD, and roles of various stakeholders in implementing the strategic plan of action on NCD.

6.0   TUTOR-MARKED ASSIGNMENT

1. What are the roles of state government in Implementing this Strategic Plan of Action National Strategic Plan of Action on NCDs?

7.0   REFERENCES/FURTHER READING

Ekpenyong, C. E., Udokang, N., Akpan, E., & Samson, T. (2012). "Double Burden, Non-Communicable Diseases And Risk Factors Evaluation In Sub-Saharan Africa: The Nigerian Experience". *European Journal of Sustainable Development*, *1*(2), 249. https://doi.org/10.14207/ejsd.2012.v1n2p249

National Policy & Strategic Plan of Action on NCDs. *Nga_B3_Ncd Policy And Strategic Plan Of Action.*pdf https://extranet.who.int/ncdccs/Data/NGA_B3_NCD%20POLIC Y%20AND%20STRATEGIC%20PLAN%20OF%20ACTION.p df

Oladepo, O., Oluwasanu, M. & Abiona, O., (2018). "Analysis of tobacco control policies in Nigeria: historical development and application of multi-sectoral action". *BMC Public Health* 18, 959, https://doi.org/10.1186/s12889-018-5831-9

Olukoya O. (2017). "The War Against Non-Communicable Disease: How Ready Is Nigeria?". *Annals of Ibadan Postgraduate Medicine*, *15*(1), 5–6.

World Health Organisation (2018) "Global Actn Plan for the Prevention and Control of NCDs. 2013-2020" http://www.who.int/nmh/ events/ncd_action_plan/en/ 6.

World Health organisation, (2019). Nigeria fulfils commitment, launches Plan for the Prevention and Control of Non Communicable Diseases.https://www.afro.who.int/news/nigeria-fulfils-commitment-launches-plan-prevention-and-control-non-communicable-diseases

Answers to SAEs. (Module 1, Unit 1)

1.   obesity indicate a weight greater than what is healthy (BMI >30), and this is a chronic condition defined by an excess amount of body fat.

2.   Types of obesity of obesity are: Food Obesity; Thickness due to Nervous Stomach; Gluten diet; Genetic metabolic Obesity; Venous circulation obesity; and Inactivity Obesity

3.   Classes of obesity
      Class 1: BMI of 30 to < 35
      Class 2: BMI of 35 to < 40
      Class 3: BMI of 40 or higher.

4.   Risk factors for obesity include: Family inheritance and influences (genetics); Lifestyle choices like, **Unhealthy diet, Liquid calories, Inactivity** (a sedentary lifestyle) Certain diseases (Prader-Willi syndrome, Cushing syndrome) and medications (antidepressants, anti-seizure medications, diabetes medications, antipsychotic medications, steroids or birth control pills), Age, **Pregnancy, Quitting smoking, Previous attempts to lose weight**

5.   **Obesity can be prevented by** moderate exercise like walking, swimming, or biking, eating well by choosing nutritious foods, like fruits, vegetables, whole grains, and lean protein, eating high-fat, high-calorie foods in moderation, and the integration of Services and Partnerships of other agencies that has something to do with obesity example food processing industries, town planning authorities etc.

6.   Obesity makes one more likely to have high blood pressure and abnormal cholesterol levels, which are risk factors for heart disease and strokes, it can affect the way one's body uses insulin to control blood sugar levels. This raises your risk of insulin resistance and diabetes. It can also increase one's risk of cancer of the uterus, cervix. It increases the likelihood that one will develop heartburn, gallbladder disease and liver problems, **infertility, gynecological and sexual problems, and osteoarthritis.**

7.   It is possible for one person who weighs 80 kg to be obese, and another person who also weighs 80 kg to be a healthy weight. This is because of their difference in height. One may be taller and assessed as an average weight for their height, whereas the other is assessed as obese because they are much shorter.

8.   BMI= weight (kg)÷ (height)^2 meters
      =$75 \div (2)^2$
      $75 \div 4 = 18.75 \text{kgm}^{-2}$
      The BMI is categorized under normal/healthy weight

Answer to TMA (Module 1, Unit 1)

1) Mr Ahmed BMI Equals $68 \div (1.70)^2 = 23.53$ kgm^{-2} while Mr. Abiodum's BMI Equals $93 \div (1.70)^2 = 32.18$ kgm^{-2}. There is a high risk of developing type 2 for Mr. Abiodum because his BMI indicated that he is obese (class 1), while Mr. Ahmed had a healthy/normal weight.

Answers to SAEs (Module 1, Unit 2)

1. If a person's BMI is under 18.5, then they are underweight
2. BMI ranges:
   i. **Underweight:** less than 18.5
   ii. **Normal/healthy weight:** 18.5 to 24.9
   iii. **Overweight:** 25.0 to 29.9
   iv. **Obese:** 30 or higher
3. Underweight can be due to genetics, high physical activity, high metabolism, illness and some medications, psychological issues such as stress, and depression.
4. Risk factors associated with underweight are hair and skin loss, osteoporosis, osteoarthritis, delayed growth and development, anemia, weakened immune system, and fertility issues

Answer to TMA (Module 1, Unit 2)

1.Underweight can be prevented by eating several meals a day, adding a high-protein and whole-grain carbohydrate snacks to ones, meals, avoiding rigorous exercises, and regular medical checkups.

Answers to SAEs (Module 1, Unit 3)

1. Integration of services and partnerships, proper financing, research and development, surveillance, monitoring and evaluation framework.
2. Barriers in prevention of NCD are: a weak health system; inadequate funding of NCD related programme and activities; and poor legislation and enforcement of laws linked to the prevention and control of NCDs.

Answer to TMA (Module1, Unit 3)

1. State Government shall through its Ministry of Health with a designated focal point be responsible for the coordination of NCDs prevention and control; provide a budgetary line and allocate adequate resources to support NCDs prevention and control, facilitate and support capacity building at state and local government levels for the implementation of this plan of action, facilitate advocacy and social mobilisation at state and local government levels for the prevention and control of NCDs, ensure access to essential medicines, basic technologies, consumables and services for the prevention and control of NCDs

at state and local government levels, ensure effective linkages and referrals between Primary Health Care and higher levels of care etc.

MODULE 2   EMOTIONAL HEALTH GROWTH

INTRODUCTION

Emotional health is a significant part of overall health of an individual, and people who are emotionally healthy are often times in control of their behaviors, feelings and thoughts. They're able to adapt to life's challenges. They do not allow their problems to occupy their focus, they try to leave for the moment, and look forward to a better future. Children who understand and express emotions more easily have better social, and empathetic skills, which can help to build relationships. They even do better academically. Even before children enter school, they are taught which emotions are appropriate to express and how they should express them.

MODULE 1

Unit 1   Introduction to Emotional Health Growth
Unit 2   Emotional Intelligence
Unit 3   Emotional Health Needs of Various Age Groups

UNIT 1   INTRODUCTION TO EMOTIONAL HEALTH
              GROWTH

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
       3.1   Emotional Health Growth
              3.1.1   What is healthy emotional growth?
       3.2   Meaning and Types Emotions
              3.2.1   What Are Emotions?
              3.2.2   Types of Emotions
       3.3   Ways to Boost Emotional Health
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Emotional health growth is the expression of one's feelings about their self, others, and the situations they will face in life around her as well as

gaining control of bodily functions, learning to focus, and pay attention in the context of nurturing support by familiar persons.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- define Emotions and enumerate the types
- identify how Emotions, influence our lives at various circumstances (at work and at home)
- examine some practical applications of Emotional Intelligence
- introduce the Six Seconds Model of Emotional Intelligence.

3.0   MAIN CONTENT

3.1   Meaning of Emotional Health Growth

3.1.1 What is Healthy Emotional Growth?

It is the ability to form secure relationship; emotional development is regulating and expressing emotions. It involves the way one feels about themselves, others and the world. Recent research shows a direct link between healthy social-emotional development and academic success.

Young children need to develop and securely express a variety of emotional responses so they can learn to adjust to new situations and achieve their desired outcomes. This results in a richer social environment and more sustaining relationships for the child and those around him or her.

Emotional development is the emergence of the experience, expression, understanding, and regulation of emotions from birth and the growth and change in these capacities throughout childhood, adolescence, and adulthood. The development of emotions occurs in conjunction with neural, cognitive, and behavioral development and emerges within a particular social and cultural context

3.2   Meaning and Types of Emotions

3.2.1 What Are Emotions?

"Emotions are reactions which are experienced differently by each individual". This is why different people can have different emotions when experiencing the same event. Also, Witherington, Campos, and Hertenstein referred to emotions as the "processes by which an

individual attempt, establish, change, or maintain his regulation to the environment on matters of significance to the person"

3.2.2 Types of Emotions

There are many different types of emotions that have an influence on how we live and interact with others. At times, it may seem like we are ruled by these emotions. The choices we make, the actions we take, and the perceptions we have are all influenced by the emotions we are experiencing at any given moment. Psychologists have also tried to identify the different types of emotions that people experience. A few different theories have emerged to categorize and explain the emotions that people feel.

During the 1970s, psychologist Paul Eckman identified **six basic emotions** that he suggested were universally experienced in all people's culture/ cultures. They were happiness, sadness, disgust, fear, surprise, and anger. He later extended his list of basic emotions to include such things as pride, shame, embarrassment, and excitement.

Source: https://www.verywellmind.com/an-overview-of-the-types-of-emotions-4163976
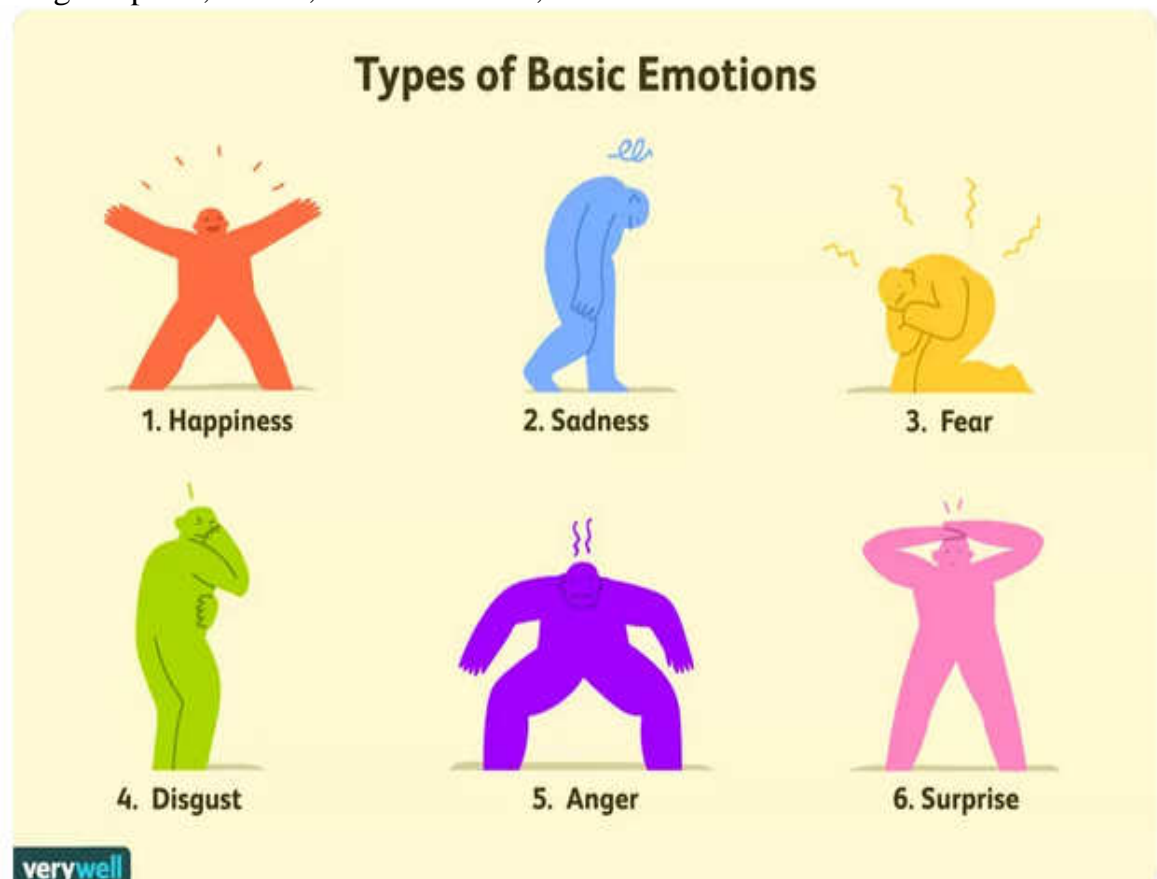
3.3   Ways to Boost Emotional Health

Taking care of your emotional health is as important as taking care of your physical body. If your emotional health is not of Equilibrium, you may experience high blood pressure, ulcers, chest pain, or a host of other physical symptoms. When you feel worthy about yourself, it's much easier to cope with life's challenges such as divorce ill health or a death. These strategies will help you stay resilient through daily stresses and when bigger personal problems arise.

1.   **Expand Your Support System**
      Problem shared is half solved as commonly said. And so it's very important that you have a support group of friends and family whom you can talk to about your problems, who will listen to you when you need to get things off your chest, so that you know you're not alone in whatever it is.

2.   **Lessen the Fear of the Unknown**
      If you have a problem, look for someone who is more Knowledgeable than you learn whatever you can about the issue or the health condition you're facing, for Knowledge is power. The more you know, the less you will fear what might happen.

3.   **Get Moving to Improve Mood and Lessen Anxiety**
      Regular exercise works as a good partner for people who are on medication, especially anyone you enjoy doing. Exercise also works well for people who have mild or moderate depression and don't need to be on medication. Think of it as a great tool for stress management.

4.   **Have Sex to Build Confidence and Self-Worth**
      Intimacy within a committed relationship has all sorts of emotional benefits, it can help make you feel good about yourself and boost self-esteem. Look out for an activity that works for you and your reliable partner that could be once a week or three times a week or twice a month depending on your schedule.

5.   **Develop a Passion by Spending Time in a Fresh Hobby**
      Everyone should have at least one hobby, whether it's taking care of gardening, listening to music, sports or going for camping. You should do something that brings you some real happiness. A passion that's all yours and that no one can take it from you. Taking a hobby and having pride in it is a great way to boost self-esteem.

6.   **Moderation in everything you do**
      Eating and drink healthy even alcohol can be a good stress reducer, but must be in moderation. The same advice applies to indulging in food.   Maintaining a healthy weight is important for your physical and your emotional health by regular exercising.

7. **Prayer and Meditate or Practice Yoga to Relieve Stress**
These types of activities are effective for stress management. Prayer and Meditation is a focused form of guided thought, Yoga and tai chi, while movement-oriented, are also proven stress busters. Other stress-reducing techniques include deep breathing and progressive muscle relaxation. If you're unsure of how to get started, take a class and learn how to practice on your own for a period of time consistently.

8. **Manage Your Time and Avoid Unattainable Deadlines by Setting Goals.**
Set task that are achievable and make a schedule and set goals for yourself. As you cross off the tasks on your to-do list, you will feel a sense of fulfillment which will help reduce stress.

9. **Get Enough Sleep to Maintain Energy and Increase Productivity**
People who get a good night's sleep wake up with more energy and tend to be more productive than if your too tired, every task and responsibility can seem exaggerated, and even small problems will feel like big ones.

10. **Say No and Mean it and Refrain from Overextending Yourself**
If you try to do more than you can handle, you will only end up frustrated and stressed out. If someone asks you to do something you absolutely can't do, say no. At the very least, ask for help. And if you can't do it, explain why kindly but firmly. However, if your emotional problems are serious and you can't seem to shake them yourself, or if you're having issues with anxiety or depression, it's very important that you see a mental health professional for help.

SELF-ASSESSMENT EXERCISE

i.   What is a healthy emotional growth?
ii.   Define emotions.
iii.   List the six basic types of emotions.

4.0   CONCLUSION

Having read this course and successfully completed the assessment it is assumed that you have attained understanding of the introductory knowledge to emotional health.

5.0   SUMMARY

In this unit, you have learnt the meaning of emotional health growth, what are emotions, types of emotions and ways to boost one's emotional

health. The assessment and self-assessment exercises have been provided to enable your own rating of understanding and learning you achieved reading this material in this unit.

6.0 TUTOR-MARKED ASSIGNMENT

1. In what ways can you boost your emotional health?

7.0   REFERENCES/FURTHER READING

Cherry, K., (2020). "The 6 Types of Basic Emotions and Their Effect on Human Behavior". **https://www.verywellmind.com/an-overview-of-the-types-of-emotions-4163976**

"Healthy Mental and Emotional Development" *Factsheet* @ https://www.mhanational.org/healthy-mental-and-emotional-development.

Lamothe, C., (2019). "How to build emotions". *Medically reviewed by Timothy J. Legg, Ph.D., CRNP*. https://www.healthline.com/health/emotional-health.

Orenstein, B.W., (2017). "10 Ways to Boost Your Emotional Health Through Improving Your Self-Esteem". **https://www.everydayhealth.com/emotional-health/10-ways-to-boost-emotional-health.aspx.**

Sato, W., Hyniewska, S., Minemoto, K, & Yoshikawa, S, (2019). "Facial Expressions of Basic Emotions in Japanese Laypeople". *Frontiers in Psychology.* 10:259. doi: 10.3389/fpsyg.2019.00259.

UNIT 2   EMOTIONAL INTELLIGENCE

CONTENTS

1.0   INTRODUCTION

There are four Levels of Intelligence: Physical**;** Spiritual**;** Mental**;** and Emotional. We are focusing on Emotional intelligence. Emotional intelligence otherwise known as emotional quotient (EQ) has become a topic of vast and growing interest globally, and is concerned with the ways we perceive, identify, understand, and manage emotions. It is an aspect of personal difference that can impact a number of important outcomes throughout a persons' lifespan.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- explain emotional intelligence
- enumerate the importance of emotional intelligence
- explain the six seconds model in reacting to stimulus or response
- explain the components of emotional intelligence
- explain how EI manifest in the healthcare environment.

3.0   MAIN CONTENT

3.1   Defining Emotional Intelligence

The word emotional intelligence was formally created in 1990 by Salovey and Mayer. It refers to "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships"or the ability to perceive, control and evaluate emotions. Emotional Intelligence is the blending of Thinking and Feeling to achieve Functionality or functional outcomes

• Thinking - Has to do with the Rational Brain
• Feeling – Has to do with the Emotional Brain.

3.1.1 Why Emotional Intelligence (EI)?

➢ We are emotional beings but we constantly want to deny our emotions e.g. men don't cry, big boys don't cry etc., thus helps individuals accept and integrate their emotions
➢ Like the bamboo you need knowledge to be rooted well before springing up
➢ Emotional Intelligence is the integrator of all emotions
➢ 50% of work satisfaction is determined by the relationship a worker has with his/ her boss.
➢ A large hospital reduced turnover of critical-care nurses from 65 to 15 percent within 18 months of instituting an emotional intelligence screening assessment.
➢ EI is a prerequisite for effective leadership across borders.

3.2   Components of Emotional Intelligence

To better understand one's emotional skills the first step is to familiarize oneself with the basic components/attributes of emotional intelligence. According to Daniel Goleman, an American psychologist, who help popularise emotional intelligence, there are five key elements to it
1.   Self-Awareness
     Individuals who exhibit high emotional intelligence usually exhibit five key attributes. The first is self-awareness. They are keenly aware of how they are feeling at every moment. They are also conscious about the way that they are engaging with the people around them. These observations allow them to make better decisions whatever the situation might be.
2.   Self-Regulation
     The second attribute is self-regulation. They have the ability to handle their emotions and not get carried away. So many people

have difficulties controlling their feelings that these inevitably end up controlling them, sometimes with devastating results. By practicing self-regulation, individuals can be more calm and deliberate in their actions.

3.   Motivation
        Another thing that comes with high EI is motivation. These people are driven to excel in everything that they do and they always find more room to improve. They keep striving to be a better version of themselves.

4.   Empathy
        With emotional intelligence also comes empathy — the ability to understand the plight of others and show compassion in the midst of their difficulties. They do not merely sympathize with these people. They are able to put themselves in the shoes of others and walk around in them, so to speak.

5.   Social Skills
        Lastly, you can spot a person with great EI through demonstrable social skills. They are able to communicate effectively with the people around them. During group tasks, they can collaborate well with their peers. In leadership positions, they have the ability to exert influence on the thoughts and actions of others.

3.3   The EI Factor

Two things determine all human activities,

- STIMULUS (TRIGGER) & RESPONSE
- Stimulus is uncontrollable, Response is controllable
- Event + Response = Outcome
- STIMULUS   ==S=P=A=C=E== RESPONSE
- Space is determined by Conditioning

3.3.1 Six Seconds Pause

- When the space is small, it is called a REACTION, when it is large it is called a RESPONSE
- To REACT is to take action without thinking
- To RESPOND is to take action after thinking
- Response is internal, we should hold ourselves accountable
- We can increase our space to delay our response
- When provoked, take a six seconds pause e.g. count to 6, name six states etc.
- You can determine your ACTION, but you can't determine the **Outcome**
- Different Stimuli elicit different Responses based on what has been stored

- The first law of Emotional Intelligence is 'Recognition'- Identify, name.

SIX SECONDS MODEL

3.3.2 Definition of Model

- Know Yourself – What am I feeling and doing?
  [SELF AWARENESS (Knowledge)] EI literacy
- Choose Yourself –Doing what you mean to do instead of reacting on auto-pilot
  [SELF MANAGEMENT (Skill)] Be intentional
- Give Yourself – Why am I doing what I am doing?
   [SELF DIRECTION (Attitude)]

Know Yourself
- Enhance Emotional Literacy i.e. know yourself. Identify Emotions at play
- Recognize Patterns (Empowering and disempowering patterns)

Choose Yourself
- Activate consequential thinking
- Risk-benefit analysis

- Navigate your emotions to your advantage – power to choose
- Be Intrinsically motivated
- Be Optimistic

Give Yourself
- Increase Empathy
- Pursue Noble Goals

Insanity
- Doing the same thing over and over again and expecting a different result
    - Alcoholics Anonymous (U.S.A)

3.4   How EI Manifests in the Healthcare Environment

Emotional intelligence can be seen at work in various situations within health care environments. After all, hospitals can be a place of great stress. Emotions can run high. For instance, you can see it in the interactions between the staff and the patients. It is also apparent when difficult news needs to be delivered to patients and their families. Members of a team often have to control their emotions and work together to achieve their goals. Health professionals have to handle the stress of their jobs and avoid making serious mistakes. They have to juggle all their responsibilities without burning out.

3.4.1 EI and Patient Outcomes

According to research, EI is one of the things that separate the most successful medical organizations from the rest. Good emotional intelligence can have several positive effects on the physician-patient relationship. The two can work together better towards rapid recovery. Doctors look for creative solutions and patients adhere to all the directions given to them.

1.   There is also increased empathy among all parties: Individuals can appreciate the difficulties being faced by those around them so they exercise more patience and understanding. It's a less stressful environment, as people are nicer towards one another. Even when some aren't being agreeable, feelings are controlled so it doesn't affect them.
2.   The value of effective communication is understood as well: With higher EI comes increased communication, which ensures that all the parties are on the same page throughout the treatment process. Nagging questions are answered right away. They don't fester or leave any doubts.

3.   Leaders are effective in their roles: They are able to say what their teams need to hear so that everyone can move with purpose. Any hurdles faced are quickly discussed to find solutions. As a result, physicians and nurses are happy with their careers. They like coming to work and it shows in the way that they conduct themselves.

3.4.2 Efforts to Improve EI among Healthcare Professionals

Emotional intelligence is not a fixed trait. Even those who have trouble with their emotions can learn to improve control with proper training. It just takes willingness on the part of the individual to get better at it.

1.   Organizations should also extend assistance to their staff, nurses and physicians to get improvements across the board.
2.   Training sessions can be conducted to enhance patient care: Most health professionals are too focused on the physical recovery of their patients. They neglect to see that these people have emotional needs that should be met as well. For instance, nurses may observe certain behavioral patterns in their patients. They can adjust their own behaviors to have better interactions with these individuals. Adjustments can also be made for a more harmonious relationship with colleagues.

Emotional intelligence can help healthcare organizations deliver better service while achieving superior outcomes. Leaders and front-liners alike should harness the power of EI through rigorous training and a patient-centered mindset.

SELF-ASSESSMENT EXERCISE

i.   What is emotional Intelligence
ii.   Enumerate the importance of emotional intelligence
iii.   List the components of emotional intelligence.

4.0   CONCLUSION

After having completed reading through this unit, and making reference to links and text provided, it is assumed that you have learned that which you are required to in this unit.

5.0   SUMMARY

In this unit, you have learnt what is emotional   intelligence (EI), importance of emotional intelligence, Components of EI, the EI factor, and how EI manifests in the healthcare environment.

6.0 TUTOR-MARKED ASSIGNMENT

1. Enumerate how EI manifest in the healthcare environment.

7.0   REFERENCES/FURTHER READING

Habib, S., Riaz, M., & Akram, M., (2012). "Emotional Intelligence as Predictor of Life Satisfaction among Nurses: Mediating Role of Spiritual Wellness", *FWU Journal of Social Sciences*, 6(1): 73-78.

Heffernan, M., Griffin, M., McNulty, S., & Fitzpatrick, J., (2010). "Self-compassion and emotional intelligence in nurses". *International Journal of Nursing Practice*, 16 (4): pp. 366-373.

Heyhoe, J., Birks, Y., Harrison, R., O'Hara, J. K., Cracknell, A., & Lawton, R. (2016). "The role of emotion in patient safety: Are we brave enough to scratch beneath the surface?" *Journal of the Royal Society of Medicine,* 109(2), 52–58. https://doi.org/10.1177/0141076815620614.

Koinis, A., Giannou, V., Drantaki, V., Angelaina, S., Stratou, E., & Saridi, M. (2015). "The Impact of Healthcare Workers Job Environment on Their Mental-emotional Health. Coping Strategies: The Case of a Local General Hospital". *Health psychology research*, *3*(1), 1984. https://doi.org/10.4081/hpr.2015.1984.

UNIT 3   EMOTIONAL HEALTH NEEDS OF VARIOUS AGE GROUPS

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
       3.1   Characteristics of various age groups and ways to address their emotional health needs
              3.1.1   Ages 5-9
              3.1.2   Ages 10-12 (A pre-teen adolescent)
              3.1.3   Ages 13-15 (An adolescent)
              3.1.4   Ages 16-18 (Adolescent)
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Everyone has emotional needs and it varies based on age. Social health reflects a child's developing ability to form close, secure relationships with other familiar people in their lives such as parents, relatives and other caregivers. This bond helps children to trust and feel safe in exploring their world. Just as you prepare your children for the start of a new school year, remember that children may not only be excited about the new school year, but nervous about all the changes that come with growing up, so is important to think about their emotional health. Their emotional health is tied into their mental health and as their parent; you are the person they look to for support and guidance. It is important to engage them on discussion on a regular basis so that you become part of the support system that they look up to when they are in trouble. For instance, a study conducted by Kids-Health reported that kids were stressed out the most by: grades, school, and homework (36%); family (32%); and friends, peers, gossip, and teasing (21%)." However, only 22% of these kids dealt with their stress by talking to their parents. So we should try to make our children confide in us.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- identify the common characteristics of various age groups
- identify ways to address the emotional health needs of various age groups.

3.0   MAIN CONTENT

3.1   Characteristics of Various Age Groups and Ways to Address their Emotional Needs

3.1.1 Ages 5-9

Characteristics
- Trust their teachers more than any other person ("our teacher said")
- Have increased ability of their emotions, self-control
- Know how to mask emotions and their use of coping strategies (by age 8) i.e. pretending
- Have knowledge of how their actions affect others
- Be able to "step into another's shoes" (acting like mummy or daddy)
- Forming peer groups
- They more time with peers and less time with parents

Ways to address the need of the child
- Increase the child's self-esteem with warm, positive parenting and motivation
- Avoid comparing children among themselves and help them overcome failures
- Give advice and encouragement when they come across moral questions such as lying, stealing, cheating, etc.
- Help the child think about how to handle feelings of anger and similar emotions in safe ways to avoid tantrums
- Encourage respect and positive relationships between the children and others
- Talk to the child about friends, school, and feelings frequently
- Expect that the child's level of independence will change depending on the situation

3.1.2 Ages 10-12 (A Pre-teen Adolescent)

Characteristics
- Usually has emotional swings (feeling wonderful one minute, and sad or irritable the next)
- Begins to rely more on peers
- Opinions accepted by peers' means being the best
- Still relies on bonds with parents though it may not be demonstrated
- Has thoughts of independence but bonds with family are still clear (I can do it myself)
- Questions rules and values, often will say things are "unfair"
- May begin to have body image issues

Ways to address the need of the child
- Pay attention to the preteen and take their feelings seriously
- Don't ignore the issues they worry about
- Work together for solutions when problems arise
- Schedule time for family togetherness (shared meals, weekend activities)
- Be involved in social media activities
- Reinforce your family's values
- Give room for independence and identity exploration
- Conscious of their self-esteem and feelings of self-worth

3.1.3 Ages 13-15 (An adolescent)

Characteristics
- Struggles with sense of identity; worries about being normal or "fitting in" in his/her group
- Lacks self-confidence and feels awkward or strange about self & body image
- Maintains high expectations for self
- Still relies on attachment with parents but not in an open manner
- Complains that parents interfere with independence
- Begins testing rules and limits
- Develops more friendships with opposite sex
- Has increased exposure to sex and drugs
- Looks for a group of peers where they fit in and are accepted
- Gets more interested in physical appearance and clothing styles influenced by peer group
- Commonly experiences moodiness
- When stressed may likely return to childish behavior
- Develops intellectual interests, which become more important
- Tries to find fault from his/her parents especially when being instructed.

Ways to address the need of the child
- Provide an open line of communication
- Be friendly but don't forget you are the parent
- Set clear expectations and limits.
- Talk about difficult issues early on (bullying, sex, drugs, gangs, etc.)
- Don't wait until they initiate the conversation
- Get to know your teenager's friends
- Don't overreact to deviations in fashion style or look
- Be sensitive to personality matters
- Discuss ideal sand your values about topic such as honesty, uprightness, and obligation.
- Provide positive feedback

- If you suspect a problem, ask your teen what is bothering him/her and then pay attention
- Be sincere about your experiences to help them make sensible decisions

3.1.4 Ages 16-18 (Adolescent)

Characteristics
- Girls are more likely to be physically mature
- Boys may not have completed physical maturity
- Exhibits an increased interest in the opposite sex
- Tests rules and limits
- Chooses role models
- May experiment with sex and drugs (cigarettes, alcohol, marijuana)
- Interests and clothing style are influenced by peer group.
- Peers are still important but moving towards their own identity/thoughts
- Commonly experiences moodiness
- More stress and anxiety about future choices (work/school)

Ways to address the need of the child
- Provide an open line of communication and supportive environment
- Don't be judgmental and disregard their ideas and plans for the future
- Provide space for exploration of new interests
- Don't overwhelm them with talks of the future
- Talk regularly about difficult issues (sex, drugs, gangs, etc.)
- Continue to reinforce your family's values
- Set expectations and limits with room for independence
- Provide positive feedback
- If you suspect a problem, ask your teen what is bothering him/her and then listen

SELF-ASSESSMENT EXERCISE

Enumerate the characteristics of any age group and explain the ways to address their needs.

Answer
Ages 16-18 (Adolescent)
Characteristics: Girls are more likely to be physically mature; Boys may not have completed physical maturity; Exhibits an increased interest in the opposite sex; Tests rules and limits

Ways to address their need: Provide an open line of communication and supportive environment; Don't be judgmental and disregard their ideas and plans for the future; and Talk regularly about difficult issues (sex, drugs, gangs, etc.)

4.0   CONCLUSION

In this unit you have information on the characteristics and ways to address the emotional Health Needs of Various Age Groups.

5.0   SUMMARY

In this unit, you have read about, children of various age groups, their emotional health needs and ways to address them. All these are considered important knowledge and background of how we react in different situations. The text and online links attached to this unit when consulted should further your understanding of the subject matter.

TUTOR-MARKED ASSIGNMENT

1. List the various characteristics of various age groups.

7.0   REFERENCES/FURTHER READING

Orenstein, B.W., (2017). Medically Reviewed by Kathryn Keegan, MDLast Updated: November 10, 2017.

World Health Organisation, (2020). "Adolescent Mental Health" https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health.

Kang, S., Pai, C.K., & Kim, K., (2019). "The Role of Chronological Age, Health, and Basic Psychological Needs for Older Adults' Travel Intention". *Sustainability* 11, 6864; doi:10.3390/su11236864.

MODULE 3   DEVELOPMENT

INTRODUCTION

Development in humans is a continuous process that begins when an ovum is fertilised by a sperm. Cell division, growth, differentiation, and even cell death, transform the fertilized ovum into a multicellular human being. Human development approach - is about expanding the richness of human life, rather than simply the richness of the economy in which human beings live. It is an approach that is focused on people and their opportunities and choices. In this module it gives the student a background in normal physical growth, cognitive, socio-emotional, and personality development through childhood, into adulthood.

Unit 1   Prenatal Development
Unit 2   Infancy through Childhood and Adolescence Stage
Unit 3   Emerging Adulthood and Adulthood

UNIT 1   PRENATAL DEVELOPMENT

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
        3.1   Meaning of prenatal development
        3.2   Germinal stage
        3.3   Embryonic Stage
        3.4   Fetal stage
        3.5   Prenatal Influences
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Development is a process of life span into various *phases* such as: Prenatal *Development; Infancy* and Toddlerhood; Early *Childhood*; Middle *Childhood*; *Adolescence*; Early *Adulthood*; Middle *Adulthood* and Late *Adulthood*. From the conception till death that is throughout life, we will continue to develop. The concepts and mechanisms inherent in the process of human development from birth to old age, with an importance on the physical, cognitive, and socioemotional changes associated with each life stage. Developmental psychologists often

divide human development into three areas: physical development, cognitive development, and psychosocial development. According to Erikson's, lifespan development is divided into different stages based on age, prenatal, infant, child, adolescent, and adult developments.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- explain the meaning of prenatal development
- describe the three stages of prenatal development
- recognise prenatal influences the importance of prenatal care.

3.0   MAIN CONTENT

3.1   Meaning of Prenatal Development

Prenatal development is defined as the process of growth and development within the womb from fertilization until birth. During this process, the zygote grows into an embryo and then a fetus. The process of Prenatal development occurs in three main stages germinal, embryonic, and fetal stage

3.2   Germinal Stage (Weeks 1–2)

Starts as a one-cell structure that is formed when a sperm and egg merge. The genetic makeup and sex of the baby are set at this point. During the first week after conception, the zygote divides and multiplies, going from a one-cell structure to two cells, then four cells, then eight cells, and so on and this process of cell division is called mitosis. Mitosis is a fragile process, and fewer than one-half of all zygotes survive beyond the first two weeks. Five days later the mitosis multiplies to 100 cells, and after 9 months there are billions of cells specialized, forming different organs and body parts.

3.3   Embryonic Stage (Weeks 3–8)

After the zygote divides for about 7–10 days and has 150 cells, it travels down the fallopian tubes and implants itself in the lining of the uterus and upon implantation foams an embryo with   the placenta. The placenta is a structure connected to the uterus that provides nourishment and oxygen from the mother to the developing embryo via the umbilical cord. At this stage, the heart begins to beat and organs form and begin to function. Also neural tube forms along the back of the embryo, developing into the spinal cord and brain.

3.4   Fetal Stage (Weeks 9–40)

Around nine weeks old, the embryo is called a fetus is about the size of a kidney bean and begins to take on the recognizable form of a human being as the "tail" begins to disappear. The intestines, lungs, heart, and stomach, have formed enough that a fetus born prematurely at this point has a chance to survive outside of the mother's womb. The fetus continues to gain weight and grow in length until approximately 40 weeks when delivery takes place.

9 weeks
Fetal stage begins

12 weeks
Sex organs differentiate

16 weeks
Fingers and toes develop

20 weeks
Hearing begins

24 weeks
Lungs begin to develop

28 weeks
Brain grows rapidly

32 weeks
Bones fully develop

36 weeks
Muscles fully develop

40 weeks
Full-term development

During the fetal stage, the baby's brain develops and the body adds size and weight, until the fetus reaches full-term development.

Source: https://courses.lumenlearning.com/wsu-sandbox/chapter/stages-of-development/

3.5 Prenatal Influences

During each prenatal stage, genetic and environmental factors can affect development. The developing fetus depends entirely on the mother for life and it is vital that the mother takes good care of herself and receives prenatal care, which is medical care given during pregnancy that monitors the health of both the mother and the fetus. According to the National Institutes of Health, routine prenatal care is important because it can reduce the risk of complications to the mother and fetus during pregnancy. Also pregnant mothers are advice to take a vitamin containing folic acid, which helps prevent certain birth defects, eat balanced diet, exercise routinely. However, if the mother is exposed to something harmful, it may show life-long effects on the child.

SELF-ASSESSMENT EXERCISE

i.   Define prenatal development
ii.   List the three stages of prenatal development and characterize them by weeks
iii.   What is a placenta?
iv.   Explain what happens at the fetal stage of prenatal development

4.0 CONCLUSION

In this unit you are provided with information on the meaning of prenatal development, the stages of prenatal development and prenatal influences. The unit also provided you with self-assessment exercises to arouse your interest and guide your reading through the unit.

5.0 SUMMARY

In this unit, you have read and learnt the meaning of development, stages of prenatal development and importance of prenatal care to the mother and the unborn child. All these are considered as important knowledge of the first stage of development. The texts and online links attached to this unit when consulted with attention, should further your understanding.

6.0 TUTOR-MARKED ASSIGNMENT

1. What is prenatal care and why is it importance.

7.0   REFERENCES/FURTHER READING

Buffa G, Dahan S, Sinclair I, St-Pierre M, Roofigari N, Mutran D, Rondeau, J.J. & Dancause, K.N. (2018). "Prenatal stress and child development: A scoping review of research in low- and middle-income countries". *PLoS ONE* 13(12): e0207235. https://doi.org/10.1371/journal.pone.0207235

Bushell, W., Heil, M., Ventura, T., Gomes, M.C., Korner, L.M., Lawrenz, J., Schaal N.K. & Richards, G., (2021) "A Pre-registered Meta-analysis Based on Three Empirical Studies Reveals No Association Between Prenatal (Amniotic) Cortisol Exposure and Fluctuating Asymmetry in Human Infants". *Evolutionary   Biology,*   48, 54–66. https://doi.org/10.1007/s11692-020-09523-9

Gartstein, M.A., & Skinner, M.A., (2018). "Prenatal influences on temperament development: The role of environmental epigenetics". *Development and Psychopathology* 30 (2018), 1269–1303. doi:10.1017/S0954579417001730

Molfese, V., **Prokasky**, A., **Rudasill**, K.M., **Acar**, I.H., **Tu**, X., **Sirota**, K., & **Keiser**, B., (2017). "Prenatal Development". *Oxford   Bibliographies   Online*   DOI: 10.1093/OBO/9780199828340-0135.

UNIT 2   INFANCY THROUGH CHILDHOOD AND ADOLESCENCE STAGE

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
        3.1   Infancy through Childhood Stage
                3.1.1   Physical Development
                3.1.2   Cognitive Development
                3.1.3   Psychosocial development
        3.2   Adolescence Stage
                3.2.1   Physical Development
                3.2.2   Cognitive Development
                3.2.3   Psychosocial Development
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Infancy is the first year of life and is the period of most rapid growth after birth. As a toddler, humans develop motor skills, such as the ability to walk, and communication skills. Adolescence is an important period in terms of physical, mental, emotional, and social changes. Early childhood, middle childhood, and adolescence represent the 3 stages of child development. Each stage is organized around the primary tasks of development for that period.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- enumerate the stages of infancy through childhood
- explain the physical, cognitive, and psychosocial development of children at this stage
- describe the changes that occurs at the adolescent stage of life
- explain the physical, cognitive and psychosocial changes during the period of adolescence.

3.0   Main Content

3.1   Infancy through Childhood Stage

The stages of Infancy and Childhood are: infancy (birth to 2 years old), early childhood (3 to 8 years old), and middle childhood (9 to 11 years old). The average newborn weighs approximately 7.5 pounds. Although small, a newborn is not completely helpless because his reflexes and sensory capacities help him interact with the environment from the moment of birth. All healthy babies are born with newborn reflexes. Reflexes help the newborn survive until it is capable of more complex behaviors and are present in babies whose brains are developing normally and usually disappear around 4–5 months old. For example, when you stroke a baby's cheek, she naturally turns her head in that direction and begins to suck. Sucking reflex is automatic, unlearned.

3.1.1 Physical Development

Rapid body development is rapid during infancy, toddlerhood, and early childhood. Newborns weigh between 5 and 10 pounds on average and a newborn's doubles it weights in six months and triples in one year. At 2 years old the weight will have increased fourfold, so we can expect that a 2-year-old should weigh between 20 and 40 pounds. The average length of a newborn is 19.5 inches, increasing to 29.5 inches by 12 months and 34.4 inches by 2 years old. For girls as soon as the reach 8–9 years old, their growth rate increases more than that of boys due to a pubertal growth spurt. This growth spurt continues until around 12 years old, coinciding with the start of the menstrual cycle. By 10 years old, the average girl weighs 88 pounds, and the average boy weighs 85 pounds.

Developmental Milestones, Ages 2–5 Years				
Age (years)	Physical	Personal/Social	Language	Cognitive
2	Kicks a ball; walks up and down stairs	Plays alongside other children; copies adults	Points to objects when named; puts 2–4 words together in a sentence	Sorts shapes and colors; follows 2-step instructions
3	Climbs and runs; pedals tricycle	Takes turns; expresses many emotions; dresses self	Names familiar things; uses pronouns	Plays make believe; works toys with parts (levers, handles)

Developmental Milestones, Ages 2–5 Years				
Age (years)	Physical	Personal/Social	Language	Cognitive
4	Catches balls; uses scissors	Prefers social play to solo play; knows likes and interests	Knows songs and rhymes by memory	Names colors and numbers; begins writing letters
5	Hops and swings; uses fork and spoon	Distinguishes real from pretend; likes to please friends	Speaks clearly; uses full sentences	Counts to 10 or higher; prints some letters and copies basic shapes

Source: https://courses.lumenlearning.com/wsu-sandbox/chapter/stages- of-development/

3.1.2 Cognitive Development

In addition to rapid physical growth, young children also exhibit significant development of their cognitive abilities. Piaget thought that children's ability to understand objects such as learning that a rattle makes a noise when shaken was a cognitive skill that develops slowly as a child matures and interacts with the environment. Today, developmental psychologists think Piaget was incorrect. Researchers have found that even very young children understand objects and how they work long before they have experience with those objects. Starting before birth, babies begin to develop language and communication skills. At birth, babies apparently recognize their mother's voice and can discriminate between the language(s) spoken by their mothers and foreign languages, and they show preferences for faces that are moving in synchrony with audible language.

3.1.3 Psychosocial Development

Psychological development occurs as children form relationships, interact with others, and understand and manage their feelings. Forming healthy attachments is very important and is the major social milestone of infancy. Attachment is a long-standing connection or bond with others. Developmental psychologists are interested in how infants reach this milestone. They ask such questions as: How do parent and infant attachment bonds form? How does neglect affect these bonds? What accounts for children's attachment differences?

3.2   Adolescence

Adolescence is the period of development that begins at puberty and ends at emerging adulthood and within age range of adolescence is from 10 to 19 years, and this stage of development also has some anticipated physical, cognitive, and psycho-social milestones.

3.2.1 Physical Development

While the order of physical changes in puberty is known, the onset and pace of puberty vary. Some physical changes that occur during puberty are the maturing of the adrenal glands and sex glands, primary and secondary sexual characteristics develop and mature e.g. the uterus and ovaries in females and testes in males, development of breasts and hips in girls, and development of facial hair and a deepened voice in boys. Also girls experience menarche, the beginning of menstrual periods, usually around 12–13 years old, and boys experience spermarche, the first ejaculation, around age 13–14 years old.

3.2.2 Cognitive Development

More complex thinking abilities emerge during adolescence due to increases in processing speed and efficiency rather than as the result of an increase in mental capacity, in other words, due to improvements in existing skills rather than development of new ones. Throughout adolescence, teenagers change beyond concrete thinking and become capable of intellectual thought. Recall that Piaget refers to this stage as formal operational thought and their thinking is also characterized by the ability to consider various points of view, imagine theoretical situations, debate ideas and opinions (e.g., religion, politics and justice), and form new ideas. In addition, it's not uncommon for adolescents to question authority or challenge established societal norms. Rational empathy begins to increase in adolescence and is a significant factor of social problem solving and conflict prevention. According to one longitudinal study, levels of cognitive empathy begin rising in girls around 13 years old, and around 15 years old in boys. Teenagers who reported having caring fathers with whom they could discuss their fears were found to be better able to take the viewpoint of others.

3.2.3 Psychosocial Development

Adolescents continue to refine their sense of self as they relate to others. Erikson referred to the task of the adolescent as one of identity versus role confusion. Thus, in Erikson's view, an adolescent's main questions are "Who am I?" and "Who do I want to be?" Some adolescents adopt the values and roles that their parents expect for them. Others develop

identities that are in opposition to their parents but align with a peer group. This is common as peer relationships become a main focus in adolescents' lives. As adolescents work to form their own identities, they tend to detach from their parents, and the peer group becomes more important to them. Even though the spend less time with their parents, most teens report positive feelings toward them. Warm and healthy parent-child relationships have been associated with positive child outcomes, such as better grades and fewer school behavior problems, in the United States as well as in other countries.

SELF-ASSESSMENT EXERCISE

i.   Enumerate the stages of Infancy and childhood in years.
ii. Describe some of the new born reflexes and how they promote survival.
iii. When is the period of adolescence?

4.0   CONCLUSION

In this unit you have learnt about developmental stage of infancy trough adulthood and adolescence under, physical, cognitive, and psychosocial developmental stages.

5.0   SUMMARY

In this unit you have learnt how human beings develop from infancy to the adolescent stage of life and the peculiar changes that occur at each stage. The self-assessment exercises you attempted will broaden your understanding and the amount of learning you have achieved after having studied this unit. The online links provided were meant to also broaden your knowledge and understanding of this unit.

6.0 TUTOR-MARKED ASSIGNMENT

1.What are the physical developments that occur during adolescence stage and does it vary among male and females?

7.0   REFERENCES/FURTHER READING

Bornstein, M. H., (2014). "Human infancy, and the rest of the lifespan". *Annual Review of Psychology*, *65*, 121–158. https://doi.org/10.1146/annurev-psych-120710-100359

Frank, D. A., Rose-Jacobs, R., Crooks, D., Cabral, H. J., Gerteis, J., Hacker, K. A., Martin, B., Weinstein, Z. B., & Heeren, T. (2011). "Adolescent initiation of licit and illicit substance use: Impact of intrauterine exposures and post-natal exposure to violence". *Neurotoxicology and Teratology*, *33*(1), 100–109. https://doi.org/10.1016/j.ntt.2010.06.002

Institute of Medicine (US) and National Research Council (US) Committee on the Science of Adolescence. "The Science of Adolescent Risk-Taking: Workshop Report". *Washington (DC): National Academies Press* (US); 2011. 4, The Psychology of Adolescence. Available from: https://www.ncbi.n lm.nih. gov/ books/NBK53420/

Lumen, Introduction to psychology. "Lifespan Development: Infancy through Childhood". **https://courses.lumenlearning.com/pcc-wmopen-psychology1/chapter/childhood-emotional-and-social-development/**

Sparks note, "Development: Infancy through childhood" https://www.sparknotes.com/psychology/psych101/development/section3/

Weinert, S., Linberg, A., Attig, M. Freund, J., & Linberg, T., (2016). "Analyzing early child development, influential conditions, and future impacts: prospects of a German newborn cohort study." *International Journal of Child Care and Education Policy,* **10,** 7. https://doi.org/10.1186/s40723-016-0022-6

UNIT 3   EMERGING ADULTHOOD AND ADULTHOOD

CONTENTS

1.0   Introduction
2.0   Intended Learning Outcomes
3.0   Main Content
        3.1   Emerging Adulthood
        3.2   Adulthood
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Development of *emerging adulthood*, a unique *stage* of the life course brought about by a set of social changes. It's a *stage* in life that allows *young* individuals to *develop* characteristics that will help them become self-sufficient. The degree of agency and role exploration that characterizes emerging adulthood results in the potential for *growth* in intellectual and emotional functioning. Also, Adulthood, is the period in the human lifespan in which full physical and intellectual maturity have been attained.

2.0   OBJECTIVES

By the end of this unit, you will be able to**:**

- explain the changes that occur during emerging adulthood
- describe the Adulthood stage of development.

3.0   MAIN CONTENT

3.1   Emerging Adulthood

The next stage of development after adolescent stage is the emerging adulthood. This is a relatively newly defined period of lifespan development spanning from 18 years old to the mid-20s, characterized as an in-between time where identity exploration is focused on work and love. In the United States, you are legally considered an adult at 18 years old. But other definitions of adulthood vary widely; in sociology, for example, a person may be considered an adult when she becomes self-supporting, chooses a career, gets married, or starts a family. The ages at which we achieve these feat vary from person to person as well

as from culture to culture. For example, in Nigeria a 22 years married with a child is regarded as an adult more than a 30-year unmarried boy or girl in her culture she is considered an adult.

The Five Features of Emerging Adulthood are:

1.   The age of identity explorations;
2.   The age of instability;
3.   The self-focused age;
4.   The age of feeling in-between; and.
5.   The age of possibilities.

3.4   Adulthood

Adulthood begins around 20 years old and has three distinct stages: early, middle, and late adulthood. Each stage brings its own set of rewards and challenges. Physical maturation is complete, although our height and weight may increase slightly.

In young adulthood, our physical abilities are at their peak, including muscle strength, reaction time, sensory abilities, and cardiac functioning. Most professional athletes are at the top of their game during this stage. Many women have children in the young adulthood years, so they may see additional weight gain and breast changes. The persons assume responsibility for every decision taken.

In middle adulthood from the 40s to the 60 there is gradual physical decline with skin loses some elasticity, and wrinkles are among the first signs of aging, visual acuity decreases, women experience a gradual decline in fertility as they approach the onset of menopause, and the end of the menstrual cycle, around 50 years old. Hair begins to thin and turn gray.

Late adulthood is considered to extend from the 60s on. The skin continues to lose elasticity, reaction time slows further, and muscle strength diminishes. Smell, taste, hearing, and vision, so sharp in our twenties, decline significantly. The brain may also no longer function at optimal levels, leading to problems like memory loss, dementia, and Alzheimer's disease in later years. Movements becomes slower and slower; and the rate of absorbing shock slows down. While raising children can be stressful, especially when they are young, research suggests that parents reap the fruit of their labour, as adult children tend to have a positive effect on parental well-being. Also having a stable marriage has also been found to contribute to well-being throughout adulthood. Another aspect of positive aging is believed to be social connectedness and social support. As we get older, socioemotional

selectivity theory suggests that our social support and friendships reduce in number, but remain as close, if not more close than in our earlier years

SELF-ASSESSMENT EXERCISE

i.   What is emerging adulthood and what are some factors that have contributed to this new stage of development?
ii.   List the three stages of adulthood.

4.0   CONCLUSION

In this unit you have read and learnt what happens during emerging adulthood and middle adulthood stage of human development. The information and knowledge you acquired from this unit and consultations you made going over texts and looking over the online links were meant to enhance your understanding of human development. Your performance in the self-assessment exercises will indicate to you your strength and weakness in this unit. Therefore, you are encouraged to go over the unit with more careful detailed attention

5.0   SUMMARY

In this unit you have successfully learnt what is needed that you know concerning emerging adulthood and adulthood stage of development.

6.0 TUTOR-MARKED ASSIGNMENT

1. What is the characteristics of middle adulthood?

7.0   REFERENCES/FURTHER READING

Gilmore, K. (2019). "Is Emerging Adulthood a New Developmental Phase?" *Journal of the American Psychoanalytic Association,* 67(4), 625–653. https://doi.org/10.1177/0003065119868680

Hochberg, Z, & Konner, M., (2020). "Emerging Adulthood, a Pre-adult Life-History Stage". *Frontiers in Endocrinology.* 10:918. doi: 10.3389/fendo.2019.00918

Hochberg, Z. E., & Konner, M. (2020). "Emerging Adulthood, a Pre-adult Life-History Stage". *Frontiers in Endocrinology*, *10*, 918. https://doi.org/10.3389/fendo.2019.00918

Robinson,   O.,   (2012). "Development   through   Adulthood": *An Integrative Sourcebook*. Macmillan Education UK. ISBN 978-0-230-29799-9

Salvatore, C., (2018). "Introduction to Emerging Adulthood. In: Sex, Crime, Drugs, and Just Plain Stupid Behaviors. Palgrave Macmillan, Cham." https://doi.org/10.1007/978-3-319-72766-0_1

Trentacosta, C. J., & Izard, C. E., (2021). "Emotional development". *Encyclopedia   Britannica.* https://www.britannica.com/science/emotional-development

Wood D. Crapnell, T., Lau, L., Bennett, A., Lotstein, D., Ferris, M., & Kuo, A., (2018). "Emerging Adulthood as a Critical Stage in the Life Course". *In: Halfon N., Forrest C., Lerner R., Faustman E. (Eds). Handbook of Life Course Health Development;   pp   123-143   Springer,   Cham.* https://doi.org/10.1007/978-3-319-47143-3_7

MODULE 4   FAMILY SIZE AND POPULATION CONTROL

INTRODUCTION

The number of persons in the family is a matter of great importance not only for the country as a whole but also for the welfare and health of its citizenry, the family and the community. Cynicism has been expressed about the trend of family sizes and its tendency for a probable world population explosion which could plunge poor developing countries into further poverty and helpless wretchedness. In 1963, Nigeria's population was 55.6 million. Thirty years later, it was 167 million and the current population of Nigeria in 2021 is 211,400,708, a 2.55% increase from 2020. To track such dramatic changes in population, a census programme needs to be put into place that can collect data on the country's population size, distribution, growth rate, and composition.

Unit 1   Family Size and Family Life Education
Unit 2   Population Size and Growth
Unit 3   Family Planning and Its Benefits

UNIT 1   FAMILY   SIZE   AND   FAMILY   LIFE EDUCATION

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
        3.1   Introduction to Family Size, and family Life Education
                3.1.1   Meaning of Family
                3.1.2   What is family Size?
                3.1.3   What is an ideal Family size?
                3.1.4   Defining Family Life education
        3.2   Core Messages in Family Life Education in Nigeria
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

In developed nations, large family sizes and the resultant high birth rates accompanied rapid population growth during the industrial revolution

are mainly because of improved public health. The most important fact of family life education is that it helps newly married couples and parents to live up to their responsibilities successfully and excellently. Large families produce more deviants in the society, while smaller families tend to train their children very well because the resources they have will take care of their most needs resulting in higher academic achievement, IQ, and occupational performance. Perinatal illnesses and deaths are higher in large families as birth weights decrease.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- describe family and family size
- explain what is meant by an ideal family
- enumerate the core messages in family life education (FLE).

3.0   MAIN CON\TENT

3.1   Introduction to Family and Family Size

Human being is a social creature, and he cannot survive in loneliness, he forms a group in which the members have a similar kind of feelings. It is the family where we live and learn to live as a social creature. However, the size of the family is a matter of great importance not only for the country as a whole but also for the welfare and health of the individual, the family and the community because family needs a balance between the size and the resources of the family. The source of income needs to be managed according to the family size.

3.1.1 Meaning of Family

The family is the basic social unit. A family is made up of people related by blood, marriage or law (formal or social). Examples of family members related by blood are brothers and sisters, parents and their children. Family members related by marriage include, not only husband and wife, but also the husband's and wife's relatives. For example, if a woman's husband has a brother, he is her brother-in-law. There also can be family members who are not related by blood or marriage. For example, a child may be adopted, that is, raised by people other than his natural parents. Sometimes adoptions are done by a legal procedure and sometimes they are just an agreement between two families. In both cases, the adopted child becomes a member of his or her new family.

3.1.2 What is Family Size?

Family size generally refers to the total number of individuals in a family. However, from a demographic perspective, it refers to the number of total number of children born to a woman at a point of time.

3.1.3 What is the Ideal Family size?

In most developed countries like America, a two-to-four child range appears at the very least to be the normative range of ideal family size. The average household size in Nigeria is 5.0 persons. The household size is slightly higher in rural areas than in urban areas (5.1 versus 4.7 persons). It is also higher in the north than the south. The factors influencing desired family size are house hold income, sex preference, psychological, mother's health, education, religion, knowledge of contraception and age at marriage.

3.1.4 Defining Family Life Education

Family Life Education is the professional practice of Equipping and empowering family members to develop knowledge and skills that enhance well-being and strengthen interpersonal relationships through an educational, preventive, and strengths-based approach. It can also be defined as any effort to strengthen family life through education or support, and can include anything from teaching about relationships in schools to providing a parent's day out.

3.2 Core Messages in Family Life Education in Nigeria

1. **Family size and welfare:** a small family size improves quality of life in the areas of: food, nutrition, clothing, health, safe drinking water, education, leisure/recreation, savings, parental care, and attention.
2. **Delayed marriage:** delayed marriage has many benefits for the individual, the community, and the country. Women who delay their marriage will have shorter reproductive spans and therefore, will tend to have fewer children than women who marry earlier. Likewise, young people who delay marriage will tend to have smaller families, be able to pursue education for self-fulfillment and gainful employment, and be able to help improve the welfare of parents, brothers and sisters.
3. **Responsible parenthood:** Having fewer and more spaced-out births promotes the health of the mother and child and affords women more opportunities for sharing social and economic responsibilities like small family size through planning, child spacing, taking care of the elderly, and knowing the physiology

of human reproduction. This can be achieved only through responsible parenting.

4. **Population change and resource development:** Population is dynamic, so people need this message on the demographic situation and population variables and their interrelationships with the environment, resources (natural and human), and socio-economic development. This also includes the effects of improved status of women on population growth and development.

5. **Population-related beliefs and values:** Every society has its own norms and values this includes socio-cultural beliefs and values, such as early marriage, preference for a son, large family, security for old age and traditional beliefs surrounding the role of women in the society.

SELF-ASSESSMENT EXERCISE

i.   Define a family

ii.   Define family size and explain what is meant by an ideal family size

iii.   What are the factors responsible for desired family size?

4.0   CONCLUSION

In this unit you have learnt about family size, family life education and the core messages in family life education The information and knowledge you acquired from this unit and consultations you made going over texts and looking over the online links were meant to enhance your understanding of human development. Your performance in the self-assessment exercises will indicate to you your strength and weakness in this unit. Therefore, you are encouraged to go over the unit with more careful detailed attention

5.0   SUMMARY

In this unit you have successfully learnt what is needed that you know concerning family, family size, ideal family size, family life education, and core messages in life education.

6.0 TUTOR-MARKED ASSIGNMENT

1. Define family life education and enumerate the core messages in family life education in Nigeria.

7.0   REFERENCES/FURTHER READING

Ballard, S.M., (2020). "FAMILY LIFE EDUCATION: The Practice of Family Life Education: Toward an Implementation Framework". *Interdisciplinary Journal of Applied Science,* 69(3): 461- 478. https://doi.org/10.1111/fare.12443

Cools, S., & Kaldager Hart, R., (2017). "The Effect of Childhood Family Size on Fertility in Adulthood: New Evidence From IV Estimation." *Demography* 54, 23–44. https://doi.org/10.1007/s13524-016-0537-z

Hennon, C.B., Radina, M.E., & Wilson S.M. (2013) "Family Life Education: Issues and Challenges in Professional Practice". *In: Peterson G., Bush K. (eds) Handbook of Marriage and the Family.* pp 815-843. *Springer, Boston, MA.* https://doi.org/10.1007/978-1-4614-3987-5_33

Human Development Library 2.0 , For sustainable Development and Basic Human needs. "The family and family size". **http://www.nzdl.org/cgi-bin/library?e=d-00000-00---off-0hdl-- 00-0----0-10-0---0---0direct-10---4-------0-1l--11-en-50---20- about---00-0-1-00-0--4----0-0-11-10-0utfZz-8- 10&cl=CL1.6&d=HASH09bd76db599173e2f3c1f7&gt=1**

Sharma, R. (2013). "The Family and Family Structure Classification Redefined for the Current Times". *Journal of Family Medicine and Primary Care*, *2*(4), 306–310. https://doi.org/10.4103/2249- 4863.123774

 Wehner, D, (2016). "Notes on Population and Family Life Education" **https://owlcation.com/academia/Notes-on-Population-and- Family-Life-Education**

UNIT 2   POPULATION SIZE AND GROWTH

CONTENTS

1.0   INTRODUCTION

The term Population can be explained as a comprehensive group of individuals, institutions, objects and so forth that have a common characteristic that are the interest. The common characteristics of the groups distinguish them from other individual, institutions, objects and so forth. In developed nations, high birth rates accompanied rapid population growth during the industrial revolution is mainly because of improved public health. Customary views of the role of women in the society make it almost impossible for them to contribute to population control. These beliefs still continue among women, especially the uneducated thinks that the most important role for a woman is to have as many children as one can have until she reaches menopause. As countries became more industrialized, both birth and death rates reduced, resulting in low population growth rates. Today, most of the developing world is characterized by high birth rates for much the same reasons as in the industrialized countries in the past. Moreover, death rates have reduced dramatically, due to improvements in health care, education and sanitation. Even though birth rates have declined substantially in many developing countries during the past years, they still remain high, mainly for the following reasons: agriculture is the most important activity for poor households, they have an incentive to invest in children to serve as farm laborers and assist with household tasks, such as fetching fire wood, water collection and taking care of the smaller ones at home (babysitting for their mother); when large families provide social security through the extended family, investing in children becomes a way of ensuring care in old age, and when there is lack of knowledge about family planning.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- explain the term population
- discuss population size and growth
- highlight the types of population growth
- explain the advantages and disadvantages of a large population
- discuss population pressures on the environment.

3.0   MAIN CONTENT

3.1   Meaning of Population

A population is the number of organisms of the same species that live in a particular geographic area at the same time, with the capability of reproducing their likes. For reproducing to occur, people must be able to mate with any other member of a population and give birth to their young. The features of the population can influence how it is affected by certain factors. The effects that *density-dependent factors* may have on a population are determined by its size; for example, a larger, denser population will be destroyed more quickly by the spread of disease than a widely dispersed population.

3.2   Population size and Growth Rate

Population size is a measurement of existing population at any point in time, while Population growth is the increase in the number of individuals in a population. Approximately, world human population growth amounts to nearly 83 million yearly, or 1.1% per annum. The global population has grown from 1 billion in 1800 to 7.8 billion in 2020. Population growth rate informs us on what is happening to the population in terms of whether it is increasing, decreasing, or remaining constant. The main objective of family planning is to achieve a low birth rate, and a low death rate. Because one of the factors that influences population growth is excess fertility. In countries where the fertility rate is higher than the death rate there will be increase population growth. This is typical of the current African population. Although the annual rate of increase varies from country to country, on average the world population is growing at 1.5% every year. If this growth rate continues, the world population will be 12 billion by 2050.

3.2.1 Types of Population Growth

While every population is unique, most population growth can be categorized into three: expansive (young and growing), constrictive (elderly and shrinking), and stationary (little or no population growth).

- **Expansive population Growth**
  This term is used to describe populations that are young and growing. These types of populations are typically representative of developing nations, whose populations often have high fertility rates and lower than average life expectancies Like Nigeria.
- **Constrictive population Growth**
  Constrictive population growth is used to describe populations that are elderly and shrinking. Constrictive population have smaller percentages of people in the younger age cohorts and are typically characteristic of countries with higher levels of economic and social development, where access to quality healthcare and education is accessible to a large portion of the population.
- **Stationary population Growth**
  Stationary, or near stationary, population are used to describe populations that are not growing. Displaying somewhat equal percentages across age, and are often characteristic of developed nations, where birth rates are low and overall quality of life is high.

3.3   Population Pressures on the Environment

Climate change, rapid population growth, low agricultural production and destruction of the environment are practices common to most of the sub-Saharan African countries, including Nigeria. As people tend to live in crowded locations on small pieces of land, there has been an increase in demand for agricultural and grazing land, as well as wood for cooking and construction, resulting to extensive and rapid deforestation and soil erosion. For example, drought in Northern Nigeria leading to migration to other fertile parts of the country. This situation in turn facilitates drought, hunger and communal clashes between farmers and herdsmen.

3.4   Advantages of a Large Population

1. **Larger working population**: Economic output will increase due to large population involving more workers participating.
2. **Increase of domestic markets**: a large population will increase the domestic market for goods and services of the country's population.

3. **Diversity of skills**: a large population is likely to be accompanied by different skills and talents possessed by the varied sections and groups can be harnessed for increased and improved production.
4. **Strategic and psychological satisfaction**: With a large population, more people will be available to defend a country.
5. **Global prestige and respect**: a large population gives a country a feeling of security and importance. This is because a country with large population gains greater respect than countries with smaller population.

3.5   Disadvantages of a Large Population

Once the population size in a country passes beyond the optimum, several disadvantages will begin to occur unless this large population is supplemented by other factors. Therefore, a large population leads to the following:

1. **Overpopulation:** a large population may lead to overcrowding, which can add strain on social services such as hospitals, schools, water, electricity, etc.
2. **Food shortages**: a large population depends on other developed countries for most of their essential needs like importing food, resulting in a trade imbalance that harms the importing nation.
3. **Political instability**: rapid and uncontrolled population growth leads to political insecurity due to the fact that the government will not be able to meet the social and economic demands of such a rapidly changing population.
4. **Unemployment**: Too much unemployment of qualified and less-qualified workers is common. A large number of unemployed workers gives rise to social vices like armed robbery, prostitution, and terrorism etc.
5. **Heavy dependency ratio**: overpopulation results in a heavy dependence ratio on those engaged in active work. for instance, ten persons can be depending on one person that is gainfully employed.

SELF-ASSESSMENT EXERCISE

i.   Define population and population size.
ii. Define population growth, list the types of population growth and explain the one peculiar to your country.
iii. Enumerate three the advantages and three disadvantages of a large population.
iv. What will happen to population size if a country experiences a high birth rate with a corresponding high death rate?

4.0   CONCLUSION

In this unit you have learnt about population size, and population growth, and its effect on the economic and social lives of individuals. The information and knowledge you acquired from this unit and consultations you made going over texts and looking over the online links were meant to enhance your understanding of human development. Your performance in the self-assessment exercises will indicate to you your strength and weakness in this unit. Therefore, you are encouraged to go over the unit with more careful detailed attention

5.0   SUMMARY

In this unit you have successfully learnt what is needed that you know concerning population, population size, and population growth, types of population growth, advantages and disadvantages of a large population.

6.0   TUTOR-MARKED ASSIGNMENT

1. What will happen to population size if a country experiences a high birth rate with disproportionally low death rates?

7.0   REFERENCE/FURTHER READING

Bawazir, A.A.A., Aslam, M. & Osman, A.F.B., (2020). "Demographic change and economic growth: empirical evidence from the Middle East". *Economic Change Restructuring,* 53, 429–450. **https://doi.org/10.1007/s10644-019-09254-8**

Boucher, L., (2016). "What are the different types of population pyramids?" https://populationeducation.org/what-are-different-types-population-pyramids/ Accessed 17th march, 2021

Pienkowski, T., Dickens, B.L., Sun, H., & Carrasco, L.R., (2017). "Empirical evidence of the public health benefits of tropical forest conservation in Cambodia: a generalised linear mixed-effects model analysis". *The Lancet Planetary Health*, 1(5): e180-e187. https://doi.org/10.1016/S2542-5196(17)30081-5.

United Nations - World Population Prospects. "Nigeria Population Growth Rate 1950-2021". https://www.macrotrends. net/countries/NGA/nigeria/population-growth-rate Accessed 17th march, 2021

Wehner, D, (2016). "Notes on Population and Family Life Education" **https://owlcation.com/academia/Notes-on-Population-and-Family-Life-Education**

Wesley, E., & Peterson, F., (2017). "The Role of Population in Economic Growth". *Sage Open,* 2017: 1-15. https://doi.org/ 10.1177/ 2158244017736094

UNIT 3   FAMILY PLANNING AND ITS BENEFITS

CONTENTS

1.0   INTRODUCTION

Family planning is one of *the* 10 great public health achievements of *the* 20th century. *The* availability of family planning gives opportunity to many women of reproductive age can *benefit* from preconception care (care before pregnancy). Contraceptive use prevents pregnancy-related health risks for women, especially for adolescent girls, and when deliveries are separated by less than two years, *the* infant mortality rate is 45% greater than it is when births are 2-3 years apart and 60% more than it is when births are four or more years separated. In developed nations, high birth rates accompanied rapid population growth during the industrial revolution is mainly because of improved public health. Traditional perceptions of women's role in society make it difficult for them to contribute to population control.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- explain family planning and its significance to population growth
- define uncontrolled fertility
- explain the benefits of family planning to the mother and child.

3.0   MAIN CONTENT

3.1   Uncontrolled Fertility

Uncontrolled fertility can be defined as when an individual or couple fail to plan their future family size to match the economic level of their family and as a result may not be able to take care of their family. Fertility is often higher in developing countries than in developed ones, which means that women living in poorer countries, like Nigeria, tend to have more children in their lifetime. As a result of the high fertility rate, poor health conditions in general, and inadequate availability of medical care, the risks of pregnancy are higher in Africa than anywhere else. An African woman's chance of dying from pregnancy-related causes, such as obstructed labour, post-partum hemorrhage, hypertensive disorders of pregnancy, post-partum infections, and unsafe abortion, averages 900 per 100,000 live births. In contrast, the risk of maternal death in the industrialized nations averages 27 per 100,000 live births. Therefore, the children can be easily affected by severe malnutrition and infections, both of which are the most common causes of under-five mortality. For every 1,000 live births, there are 140 deaths of children under five years in sub-Saharan Africa. Generally, compared to countries with lower fertility rates, countries that have high fertility rates often have higher maternal, child, and infant mortality rates.

3.2   Family Planning and Its Benefits

Family planning provides many *benefits* to every member of *the family*; it enables the mother regain her health after delivery; enough time and opportunity to love and pay attention to her husband and children; and more time for her own personal advancement.

3.2.1 Meaning of Family Planning

Family planning is an individual or collective decision-making process by couples, on the number of children that they would like to have in their lifetime, and the age interval between children. Family planning services are the ability of individuals and couples to get services from healthcare providers. It is achieved through use of contraceptive methods and the treatment of involuntary infertility to attain their desired number of children, spacing and timing of their births, and as a result improves the health of mothers and contributes to the nation's social and economic development. This means that both couples have equal rights to decide on their future fertility. In planning their desired future number of children, couples need to have the accurate information on how, and when to get and use methods of their choice without any form of compulsion. Therefore, such planning helps

partners enjoy the benefits of having planned pregnancies. Family planning is one of the strategies that are proving to be effective in tackling these problems, control unwanted population growth, improve family life and welfare, and aid the development of the nation.

3.2.2 Benefits of Family Planning

1.   **Social and economic benefits**
     Family planning reduces health risks to women and gives them more control over their reproductive lives. With improved health and more control over their lives, women can take advantage of learning, employment and community participation. Families with lesser number children are most at times able to send their children to school so girls get a chance to attain higher education, and as an outcome, the age of their first marriage is often later and their years of fertility reduced. They also benefit from being an employee.
2.   **Health benefits to the mother**
     The use of contraceptive lowers maternal death and improves women's health by inhibiting unwanted and high-risk pregnancies and lowering the need for unsafe abortions. Some contraceptives also improve the health of women by reducing the likelihood of transmission of disease and protecting against some cancers and health issues.

     i.   *Avoiding too early and too late pregnancies*: Women avoid pregnancy when they are vulnerable because of their youth or old age through the use of family planning. The risk of having pregnancy-induced hypertension (high blood pressure) is much higher in younger mothers. Likewise, older mothers, who have given birth more than 5 children i.e. grand multiparous, have a tendency to uterine rupture during labour, which can lead to severe vaginal bleeding and shock. These two consequences of age have been leading causes of maternal deaths is common in places where emergency obstetric care facilities are lacking.

     ii.   *Limiting the number of pregnancies*: Once the desired number of children has been achieved, a woman can avoid further pregnancy by using family planning methods. Any pregnancy and birth equal to, or higher than, five can have greater risks for the mother. The risk of dying from multiparty (giving birth more than once) increase for a woman who has given birth to five or more children; her risk is 1.5 to 3 times higher than those who have given birth to 2 to 3 children.

      iii.   *Preventing abortion*: Most abortions result from unwanted pregnancy, and significant numbers of maternal deaths can be attributed to unsafe abortion induced by untrained practitioners.

3.   **Benefits to the children**

Reduction of child labour and abuse: Unplanned families lead to child labour which is the employment of children in any work that deprives them of their childhood, interferes with their ability to attend regular school, which is mentally, physically, socially or morally dangerous and harmful and has become a concern due to unhealthy circumstances and multiple health implications children are subjected to. Some of the causes of child labour identified are poverty, unemployment, low income, corruption, demand for cheap labour and many others. Different measures put in place by the federal government and NGOs to deal with the issue of child labour include The Child's Rights Act (CRA) 2003, Trafficking in Persons (Prohibition) Law Enforcement and Administration Act 2003. Nevertheless, even with these laws, child labour has persisted till date. Article 32 of the UN Convention on the right of the child command state parties to recognize the rights of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development. Even with these laws on child life protection, development and general upbringing, child labour has remained a major obstacle to social development; it is a challenge and long-term goal in many countries of the world to abolish all forms of child labour. age. The consEIuences of these acts usually result in an unwanted pregnancy, sexually transmitted diseases, psychological problems and a gradual withdrawal from a healthy relationship with the opposite gender. Child labour affects not only the child but also the country in general. It is indeed a menace that must be curbed due to its harmful implications. Almagery, which is an offshoot of child labour has devastated the Nigerian economy to a great extent; killing people daily and destroying communities thereby displacing people from their homes and leaving most children orphans as parents are being killed causing a multiplier effect.

3.3   **Unmet Need of Family Planning**

- Out of 1.9 billion Women of Reproductive Age group (15-49 years) worldwide in 2019, 1.1 billion have a need for family planning; of these, 842 million are using contraceptive methods, and 270 million have an unmet need for contraception

- The percentage of the need for family planning satisfied by modern methods, Sustainable Development Goals (SDG) indicator 3.7.1, was 75.7% globally in 2019, still less than half of the need for family planning was met in Middle and Western Africa
- Only one contraceptive method, condoms, can prevent both a pregnancy and the transmission of sexually transmitted infections, including HIV.
- Use of contraception advances the human right of people to determine the number and spacing of their children.

SELF-ASSESSMENT EXERCISE

i.   What is family planning?
ii.   Define uncontrolled fertility.
iii.   What are the problems of unplanned families?

4.0   CONCLUSION

In this unit you have learnt about Family planning and its benefits. The information and knowledge you acquired from this unit and consultations you made going over texts and looking over the online links were meant to enhance your understanding of human development. Your performance in the self-assessment exercises will indicate to you your strength and weakness in this unit. Therefore you are encouraged to go over the unit with more careful detailed attention.

5.0   SUMMARY

In this unit you have successfully learnt what is needed that you know concerning uncontrolled fertility, family planning, benefits of family planning and unmet need of family planning.

6.0   TUTOR-MARKED ASSIGNMENT

1. What are the benefits of family planning to the mother?

7.0   REFERENCES/ FURTHER READING

Family Planning, (2020). RIGHTS-SIZINGFAMILY PLANNING: A Toolkit for Designing Programs to Respect, Protect, and Fulfill the Rights of Girls and Women Produced by January, 2018 CIP Resource Kit.

Gahungu, J., Vahdaninia, M. &Regmi, P., (2021). The unmet needs for modern family planning methods among postpartum women in Sub-Saharan Africa: a systematic review of the literature. *Reprod Health***18,** 35. https://doi.org/10.1186/s12978-021-01089-9

Inyang M.P., & Ralph, E.U., (2015). Child Labour: A Public Health Problem in Nigeria. *IOSR Journal of Nursing and Health Science (IOSR-JNHS) 4, (3) Ver. IV: 28-33* DOI: 10.9790/1959-04342833

Erfani, A., (2012). "The Impact of Family Planning on Women's Educational Advancement in Tehran, Iran. International Center for Research on Women Fertility & Empowerment" *Working Paper Series*. 008-2012-ICRW-FE. Pages 1-27.

MODULE 5   STRESS AND HEALTH

MODULE INTRODUCTION

Stress can pose a damaging effect on health outcomes ranging from depression, fatigue, anxiety, palpitation etc. The damaging effects on physical and mental health are large; socioeconomic differential exposure to stressful experiences can produce gender, marital status, racial-ethnic, and social class inequalities in physical and mental health.

Unit 1   Introduction to Stress
Unit 2   Impact of Stress on Health and Coping
          Strategies

UNIT 1   INTRODUCTION TO STRESS

CONTENTS

1.0   Introduction
2.0   objectives
3.0   Main Content
        3.1   Meaning of Stress
        3.2   Types of Stress
        3.3   Causes of Stress
        3.4   Signs of Stress
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Stress is normal and can be unavoidable but can take a toll on the health and effectiveness of an individual. It influences the quality of care that you can have. Stress is simply the body's reaction or response to any kind of demand or threats that disturbs the physical or mental equilibrium. Modern life is full of frustrations, financial deadlines and demands, ill health, climate change etc. Stress is inseparably interwoven with life and ceases only when an individual stops breathing. Nobody is immune to stress, both the young and old, rich and poor, professionals and lay men alike are potential victims of stress. The traditional mechanisms of handling stresses and problems of life such as moonlight tales, age grade activities, wrestling,

watching and organizing cultural dances, swimming in Village Rivers are fast fading. The above situation may have been facilitated by factors such as insecurity, rapid urbanisation, increasing corporate regimentation of work to life, breakdown of asocial supports, increasing personal group conflicts including security threats to life and property. The frustrations, disappointments and pressure of daily life amongst people of different works of life problems, including job challenges that are capable of leading them to depression and job stress. Thus, people are constantly faced with number of challenges which may include unemployment, poverty, clinical depressions, heavy drinking, compulsive disorder, and insufficient sleep. All these factors cause stress of different complexities thereby making stress a major concern of all. Stress is opposite to health and well-being of individuals.

2.0 OBJECTIVES

By the end of this unit, you will be able to:

- define stress
- identify the causes of stress
- enumerate the types and signs of stress.

3.0 MAIN CONTENT

3.1 Meaning of Stress

Stress can be defined in so many ways. Any type of change that causes physical, emotional, or psychological strain; A body's response to anything that requires attention or action. Which can come from any event or thought that makes you feel frustrated, angry, or nervous. Stress is your body's reaction to a challenge or demand. However, it can be positive, such as when it helps you avoid danger or meet a deadline.

3.2 Types of Stress

There are **two major** types of stress namely acute and chronic:
1. **Acute stress**
   This kind of stress is short lived and is as a result of unexpected stressors. Acute stress is the most common type of stress that may come from the demand and pressure of the recent past and the nearest future. Because of the short term, acute stress does not do extensive damage. Episodic stress is the acute stress that comes

frequently and often observed in people with "Type A" personality- too competitive, aggressive and demanding.

2.   **Chronic Stress**
     This is ongoing physiological agitation that results from unresolved issues or conditions. Persons experiencing chronic stress may not be able to meet up with job demands or may have decreased quality of output. Stress in the work place can eventually rob people of their passion for the job, resulting in impaired individual functioning, low motivation and decreased moral. Chronic stress destroys bodies, mind and lives. It's the stress of poverty, dysfunctional families of being trapped in an unhappy marriage or in a despised job or carrier.

Stress is also classified into two categories: **eustress** and **distress**. Eustress is also known as positive or good stress while distress is negative or bad stress. The main idea of causing these two types of stress is to show that stress can help people to reach their objectives and increases the productivity: however, stress can also lead to emotional confusion, burn out and illness.

One more type of stress is **post-traumatic stress disorder (PTSD)-** it can occur in people "who have experienced or witnessed a life - threatening event, such as a natural disaster, serious accidents, terrorist incident, sudden death. These people can relief traumatic events through night mares and flash backs.

For many workers, financial stress is so common place that it has become a part and parcel of life. Financial demand is not always bad, though, financial demand within one's income level/earning is not a threat but it becomes stress with overwhelming negative impact on health, mood, relationship and quality of life when it is beyond financial capacity. Thus such financial demand can be called financial stress. Financial stress is defined as the difficulty that an individual or household may have in meeting basic financial commitment due to shortage of money. Financial stress is defined as a period when financial system is under strain and its ability to intermediate is impaired and it is to be associated with four characteristics such as large shift access prices, an abrupt increase risk/uncertainty, liquidity, draught, and concerns about the banking system. It is used by policy makers as an instrument for monitoring financial stability. Financial stress is stress that come from being in-debt, unable to pay rent/make rent/mortgage equipment or that come from knowing you are going to have to spend a huge amount of money. Teachers and University lecturers also experience stress due to poor research incentives, poor condition of service and poor working environment.

3.3   Causes of Stress

The conditions and pressures that causes stress are known as stressors. Stressors can be external or internal. Aside financial problems, other common **external stressors** include:

1.   Major life changes like getting married or becoming a mother or a father
2.   Exhausting school or work schedule and conflicts in the workplace.
3.   Relationship difficulties (including divorce) and bereavement.
4.   Illness
5.   Loss of job and Retirement
6.   Pollution including noise
7.   Pregnancy
8.   Overcrowding, among other difficulties.

However, not all stress is caused by external factors. As earlier noted, stressor can also be **self-generated** and they include:
1.   Chronic worry
2.   Pessimism and phobia(Fear)
3.   Negative self-talk
4.   Unrealistic expectations/perfectionism
5.   Rigid thinking, lack of flexibility.

Furthermore, a repeated occurrence of fight or flight stress response in worker's daily life elevates blood pressure, suppress the immune system, increase the risk of heart attack and stroke, speed up the aging process and vulnerability to a host of mental and emotional problems.

3.4   Signs of Stress

Stress is not always easy to identify, but there are some ways to know some signs that you might be experiencing too much pressure.
(i) Physical signs (ii) emotional signs (iii) cognitive signs and (iv) behavioral signs.

1.   **Physical signs include:** Aches and pain of any kind including back and chest pain. Chronic financial stress exacerbates an already pain condition, Tendency to sweat, Digestive problems like stomach upset (diarrhea, constipation), Sexual problems like loss of libido and erectile dysfunction, Headache, fainting spells, Exacerbation of heart diseases and inducing hypertension, Lower immunity against

disease and can cause or exacerbate autoimmune disease like Rheumatoid arthritis and Weight problems

2. **Emotional signs include:** Depression or general unhappiness, Irritability or short temper, anger and agitation, restlessness/inability to relax, feeling overwhelmed, sense of loneliness/insecurity, moodiness and frequent crying, fatigue and burnout.

3. **Cognitive signs include:** Memory problems (including forgetfulness), problem of concentration, anxiety: anxious or racing thoughts and constant worrying, poor judgment, pessimistic view and premature aging of cognitive ability.

4. **Behavioral Signs include:** (i) Diminished/ loss of appetite (ii) over eating (iii) social isolation and withdrawal (iv) sleeping problems (v) unhealthy lifestyle like drug abuse, alcohol use/abuse and higher tobacco consumption.

SELF-ASSESSMENT EXERCISE

i.   Define stress.
ii.   List the five types of stress and explain the two major types.
iii.   What are stressors?
iv.   Give example of self-generated/ internal stressors.

4.0   CONCLUSION

In this unit you have learnt about meaning, types, causes and the signs of stress. The information and knowledge you acquired from this unit and consultations you made going over texts and looking over the online links were meant to enhance your understanding of human development. Your performance in the self-assessment exercises will indicate to you your strength and weakness in this unit. Therefore, you are encouraged to go over the unit with more careful detailed attention.

5.0   SUMMARY

In this unit you have successfully learnt what is needed that you know concerning the definition of stress, the two major types of stress, stressors and its examples, and the signs of stress.

6.0 TUTOR-MARKED ASSIGNMENT

1. Lists the Signs of Stress.

7.0   REFERENCES/ FURTHER READING

Ebube, C., (2016). "Impact of stress on employees productivity in financial institutions in Nigeria". *European Journal of Business and Management* ISSN 2222 – 1905 (paper) ISSN 222-283 (online) 8(19).

Ekundayo, H.T. (2013). "Stress among secondary school teachers in Ekiti State". *Journal of Education and Social Research, 3*(2), ISSN 2239-978x Doi 10.5901/jesr:r3n2p311.

European Agency for Safety and Health at Work. (2012). "*Motivation for employers to carry out workplace health promotion-Literature review*".

Manabete, S.S., Jogn, C.A., Makinde, A.A., & Duwa, S.T., (2016). "Job stress among school administrators and teachers in Nigeria secondary schools and technical colleges". *International Journal of Education, Learning and Development, 4(2)*, 1-9.

Omoniyi, M.B. (2013). "Workplace stress among university lecturers in south west Nigeria: Implication for counseling*." 1ˢᵗ Annual International Interdisciplinary Conference.* ALK Doi 3.24-26.

UNIT 2   IMPACT OF STRESS ON HEALTH AND COPING STRATEGIES

CONTENTS

1.0   INTRODUCTION

Stress can affect your body, your thoughts and feelings, and your behavior. It can increase one's risk for serious health issues, and compromise the body's general wellbeing.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- describe how stress affects the body
- enumerate stress influenced conditions
- explain the coping strategies to manage stress
- enumerate the benefits of Workplace Health Promotion Initiative.

3.0   MAIN CONTENT

3.1   Impact of Stress on Health

The link between your mind and body is obvious when you examine the impact stress has on your life, your living situation, over relationships, money, can create physical health issues. Health problems, whether you're

dealing with high blood pressure or you have diabetes, will also affect your stress level and your mental health. When your brain experiences high degrees of stress, your body reacts to it. Severe acute stress, like being involved in a natural disaster or getting into a verbal confrontation, can trigger heart attacks, arrhythmias, and even sudden death. However, this happens mostly in persons who already have heart disease. While some stress may give rise to feelings of mild anxiety or frustration. Continuous stress can also lead to burnout, anxiety disorders, and depression. If you experience chronic stress, your autonomic nervous system will be overactive, which is likely to damage your body.

3.1.1 Stress-Influenced Conditions

- Diabetes
- Hair loss
- Heart disease
- Hyperthyroidism
- Obesity
- Sexual dysfunction
- Tooth and gum disease
- Ulcers

3.2   Coping Strategy

The burden of stress in terms of human suffering, social and occupational injury and illness are huge. This calls for coping. Coping is how people try to deal, with a problem or handle the emotions it produces. Coping is a personal constantly changing cognitive and psychological efforts to manage stressful situation. Coping strategies for reducing stress can include avoidance, and over confident attitude work as well as planned problem solving, self-control and seeking social support. However, research into other Cognitive influences on behavior, such as risk perception, motivation cognitive biases or self-efficacy, which is the belief in one's ability to accomplish a task. Coping strategies is the measures adopted or adapted to overcome adverse circumstances.

3.2.1 Types of Coping Strategies

Types of coping strategies are ways of thinking and behaving adopted to reduce the difficulty experienced in a given situation, whether this difficulty is internal or external. They have been categorized into two main types:

1.   Problem-focused Coping and
2.   Emotion focused coping.

Also, workplace health promotion can be combined with existing efforts such as those related to health surveillance, workplace health and safety, and regulatory compliance.

3.2.2 Workplace Health Promotion Initiatives

This initiative deals with management of stress on the employees. It should be a collaboration of efforts between employer and the employees. The employer should take the lead. The following things should be done by the employer:

i.   Being supportive: communication with employees, demonstration of healthier behaviors and lending support for their goals and personal resolutions
ii.   Encourage aerobic exercise by having or building a walking club/gym, offering free gym subscriptions and gym allowances and allowing employees to alter their work schedule to ensure they exercise regularly
iii.   Employers should invite doctors, dietitian, personal trainer/physiotherapist to the workshop for the sensitization workshop on health and wellness, nutrition tips, and even giving a personal health assessment to your employees;
iv.   Creating a reward or incentive programme like recharge card or extra vacation day to the employee who, gave up smoking, alcohol or lost the most weight in any given month

Employee's Role
1.   Nutrition: as already noted, financially stressed employees tend to skip meals and the immune system suppressed predisposing to illness. Eating plenty of fruits and vegetables can boost appetite and having a healthy and balanced diet is also helpful.
2.   Regular aerobic/cardiovascular exercise: aerobic exercise is physical exercise of relatively low intensity and long duration which depends primarily on the cardiovascular system. Regular aerobic exercise has been documented to improve mental health, including reducing stress and lowering the incidence of depression and mortality due to cardiovascular problems (Kent, 1997). Strength training and short-duration running are not aerobic exercises but anaerobic. Examples of aerobic exercises include: (a) Running a long distance at a moderate pace (b) Playing singles tennis (c) Dancing classes (d)

Cycling using a stationary bicycle (e) Treadmill walking (f) Jogging etc.

3. Caffeine reduction: consumption of coffee and other drinks rich in caffeine should be avoided as this might lead to delusion.
4. Avoid alcohol, tobacco and drug use: this unhealthy lifestyle should be avoided as it will never leverage the issue at hand.
5. Breathing techniques: there are some effective breathing techniques which will slow down the system and help the stressed to relax (e.g., deep breathing).
6. Relaxation techniques: meditation, massage or yoga has been known to greatly help people under stress.
7. Seek professional help of a spiritual counselor or psychotherapist (Nordqvist, 2015).

3.2.3 Benefits of Workplace Health Promotion Initiative

The benefits of workplace health promotion have been established. There are many benefits from a monetary standpoint; having focused employees with more energy and self-confidence at work. These benefits are discussed below:

Improved Production and Better output
There is evidence that workplace health promotion initiatives can have a real and significant impact on individual productivity rates and overall production. Therefore, employers can benefit from workplace health programmes through enhanced productivity and production. However, the use of a holistic approach is important in enhancing the positive impact of such programmes.

Decreased Sick Leave
Most absence is an indicator of genuine illness or low employee wellbeing, with clear implications for organizations in terms of Motivation for employers to carry out workplace health promotion. There are significant and growing body of empirical studies showing the potential role of workplace health promotion programmes and their positive impact in reducing absenteeism and the costs associated with it.

Punctuality
Studies indicates that employees who turn up for work feeling unwell report that their levels of productivity are noticeably reduced. While it is unlikely that WHP will have an impact on the health of employees with short-lived conditions, it may well benefit those whose health is sub-optimal in the long term. It is clear that impaired work efficiency has

significant and real costs for employers. Workplace health promotion programmes have been demonstrated to have a positive impact on punctuality.

Improved job Satisfaction and Organisational Commitment
A vast number of scientific studies have shown a link between levels of job satisfaction in workers, their health and wellbeing. Studies showed that high levels of job dissatisfaction result in employee withdrawal and, in turn, to voluntary resignation. Enhancing the health and wellbeing of employees through WHP programmes may result in enhanced levels of job satisfaction and organizational commitment.

Reduced Staff Turnover and Intention to Quit
A major advantage of investment in well-structured health promotion programmes involving the whole workforce is a reduction in staff turnover and an improvement in the recruitment of new workers. There may also be an improvement in staff morale, which can have an indirect impact on the output. Investing in workplace health promotion may result in decreased levels of staff turnover and workers' intention to quit.

Improved Morale and Workers Allegiance
Workplace health promotion initiatives have been associated to improved employee morale and allegiance. The satisfaction of employees with their work and working environment is the foundation of an effective and supportive workplace, and a key factor in determining and improving organizational success.

Enhanced Organisational Culture and Employee Retention
The implementation of measures relating to WHP can demonstrate that the employer cares about the wellbeing of their employees, and leads to an enhanced organizational culture and an improvement in staff retention. Workplace health initiatives are central to a company's culture and, aligned with business objectives, are likely to lead to the development of a healthy and resilient workforce. This, in turn, is likely to have a direct impact on productivity and production. Therefore, investing in the health and wellbeing of workers through workplace health promotion may lead to an enhanced organizational culture and employee retention.

Reduced Costs of Accidents and Occupational Risks
One of the direct costs incurred by organisations relates to accidents and insurance premiums. There is a growing consciousness and evidence base indicating that poor employee health is related to an increased likelihood of accidents and injuries at workplace. Therefore, workplace initiatives and

strategies to promote worker health may have an indirect beneficial impact on costs related to accidents and occupational risks.

3.2.4 Financial Wellness Programme Initiative

This deals with the cause of financial stress among employees. It must include efforts that put employee and household on sure financial balance. According to Steve Stokes, financial wellness Coordinator for Goodwill Central Texas, there is need to do things to get ahead of the problem rather than trying to chase it and put out fires. Thus, the following should be put in place to address the financial challenges namely:

i.   Prompt payment of salaries and wages
ii.   Provision of affordable housing or staff quarters or accommodation allowances in lieu.
iii.   Financial education workshop: financial education tied to major life changes and critical needs. Teaching employees the need to be assertive in saying no to any financial demands that are not their direct responsibility. In addition, sharing of financial responsibilities. Employees should be taught how to augment their salaries through subsistence agriculture like poultry farming and small scale businesses
iv.   Promote split allocation of income to savings and investment.
v.   Long term contribution to retirement account
vi.   Giving of low interest loan to the employees for solid investment purposes
vii.   Setting of a welfare committee
viii.   Forming of cooperative initiative especially the traditional cooperatives, called Osusu among the Benins of Edo State, Ajo among the Yorubas of South-West, and Adashi among the Hausa of Northern Nigeria and among the Ibos it is called Utu-Ego or Isusu.

SELF-ASSESSMENT EXERCISE

i.   List the stress influenced health conditions.
ii.   Define coping strategies, and list the two major types.
iii.   What is the rationale behind Workplace health promotion initiative?

4.0 CONCLUSION

In this unit you have learnt about Effect of stress on health and itsmanagement strategies. The information and kn\owledge you acquired from this unit and consultations you made going over texts and looking

over the online links were meant to enhance your understanding of human development. Your performance in the self-assessment exercises will indicate to you your strength and weakness in this unit. Therefore, you are encouraged to go over the unit with more careful detailed attention

5.0   SUMMARY

In this unit, you have learnt, about the effect of stress and coping strategies. The rationale behind wellness programme is that encouraging healthy habits now can prevent or lower the risk of serious health conditions later. Similarly, adopting these same habits can help those with an existing health condition manage it.

6.0 TUTOR-MARKED ASSIGNMENT

1.   What are ways to address financial challenges to reduce stress?

7.0   REFERENCES/FURTHER READING

Hailu, G.N., (2020). "Practice of stress management behaviors and associated factors among undergraduate students of Mekelle University, Ethiopia: a cross-sectional study." *BMC Psychiatry* 20**,** 162 (2020). https://doi.org/10.1186/s12888-020-02574-4

Osas, U.E. & Vincent-Osaghae, G. (2014). "An evaluation of indigenous practice of osusu cooperative among the Benins of South-South Nigeria". *An International Journal of Arts and Humanities, 3*(1), 1-17.

Pathak, V. (2014). "Short Essay on Health is Wealth. Important India;" January 22, 2014 @ http://www.importantindia.com/10323/short-essay-on-health-is-wealth./

Segal, J., Smith, M., Segal, R. & Robinson, L., (2016). "Stress Signs, Signs and Causes. Help Guide;" April 2016. @ www.helpguide.org/articles/stress/stress-signs-causes-and-effects.html

Umoke, M., Umoke, P.C.I., & Nwimo, I. O. (2017). "Workplace Health Promotion Initiatives (WHPI) in the Management of Financial Stress

among Teachers". *Nigerians Journal of Health Promotion.* Pp. 146-152. ISSN: 0995-3895.

Umoke, Prince C.I. Onwe, C.B., & Umoke, M., (2018). "Knowledge of coping strategies on Menopause possessed by female non-academic Staff of University of Nigeria, Nssuka". *International Journal of Human Kinetics, Health and Education (IJoHKHE)* 4(1): 67-76. ISSN: 2449-0326.

Vermenlem, R. Hoeberichts, M., Vasicek, B., Zigrariova, D., Smiddkora, K., & Haan, J. (2015). Financial stress indices and financial crises. *Open Economics Review, 26(*3), 383-406.

MODULE 6   LABOUR SAVING DEVICES AND HEALTH

MODULE INTRODUCTION

Labor-saving devices are inventions which are not manual that reduce the time, physical labor and effort needed to perform or complete a task, such as farm equipment, home appliances and construction equipment that save time. In agriculture, production of food and textile has improved significantly since the invention of tractors, mechanical seed spreaders, harvesters and looms. The industrial revolution fashioned a belief that if a labor-intensive task existed, a device could and should be designed to substitute the organic element, whether a human or animal. Cars and tractors has substituted horses and oxen. Due to industrialization, modern employments, and more working hours, people began looking for ways to automate household tasks such as laundry, cleaning and cooking. The use of washing machines and vacuum cleaners made doing laundry and cleaning floors faster and easier for housewives and servants. The construction industry has benefited from backhoes, bulldozers, drills, cranes and power tools. On small and large projects, the time saved by using hydraulic equipment compared to using manual power and hand tools is impressive.

Labor-saving devices have transformed the world by increasing productivity and even by making some activities archaic. People are still discovering with varying degrees of success, gadgets and appliances to reduce or eliminate work. Probably the most significant labor-saving device ever invented is the computer because of its prominence in modern tools and equipment.

Most of these labor devices are sedentary and does not require as much energy as compared to manual devices when using them. for instance, the energy you use in washing clothes by hand is not the same if you are using a washing machine.

As the prevalence of obesity has increased, so has sedentary lifestyle. Progressive sedentariness has been attributed to greater use of labor saving devices, such as washing machines, and less non-exercise walking (e.g., walking to work).

Unit 1 Labour Saving Devices and Health

UNIT 1   LABOUR SAVING DEVICES AND HEALTH

CONTENTS

1.0   Introduction
2.0   Objectives
3.0   Main Content
        3.1   Meaning of Labour Saving Devices
        3.2   Selection of Labour Saving Devices
               3.2.1   Examples of Labour Saving Devices
               3.2.2   Advantages of Labour Saving Devices
        3.3   Effects of Labour Saving Device on Health
4.0   Conclusion
5.0   Summary
6.0   Tutor-Marked Assignment
7.0   References/Further Reading

1.0   INTRODUCTION

Industrialization and financial growth have given rise to shift in the types of activities that people perform in their daily routines, with television-watching and use of computer being at the forefront. A variety of domestic functions have been automated. For instance, vehicular movement in place of trekking, use of elevators in place of staircase, use of dishwashers, clothes-washing machines, and vacuum cleaners instead of manual cleaning. Each of these activities has resulted in "labor saving" and increased sedentariness. There may be likelihood that domestic automation has substantially impacted energy expenditure and thereby contributed to obesity. In countries like China, they use more of cycles than vehicles, and you can see that most of the population are lean.

2.0   OBJECTIVES

By the end of this unit, you will be able to:

- define Labour Saving Devices (LSD)
- enumerate the examples of LSDs
- list the advantages of LSDs
- explain the effect of LSDs on health.

3.0   MAIN CONTENT

3.1   Meaning of Labour Saving Device

This is a machine, gadget, etc., that reduces (human) effort, hard work or labour saving devices such as washing machines. Compare to the homes that we grew up in as children, the media tells us that our home and garden are expected to look like a show home- all of the time and you will begin to realize that standards have indeed changed with the introduction of so many labor saving devices.

In the last few years, changes in economic, and social conditions have resulted in changed responsibilities for both the gainfully employed and full time housewives. These appliances and tools have become part and parcel of the houses because of the comforts relaxations they give. Adjusting the homemaker's workload at home and outside the home necessitates the use of tools and appliances for carrying out the household activities.

3.2   Selection of Labour Saving Devices

The efficiency and use of a labour saving device includes the correct selection, operation and care of appliances so that the homemaker may achieve maximum amount of work with the minimum efforts, within the least possible time. There are a number of appliances available in the market, but in general the factors to be considered in the selection of equipment are as follows.

1.   The needs of the family members.
2.   The cost of the equipment.
3.   The usefulness of the equipment.
4.   Quality.
5.   Durability
6.   Family size and type.
7.   Guarantee
8.   Brand
9.   Safety
10. Suitable size and shape.
11. The care required for its maintenance.
12. Availability of spare parts and service facilities.
13. Easy to assemble and reassemble of parts while using and cleaning.
14. Storage Space and easy installation.

Examples of Labour Saving Devices are: Electric knife sharpener; Electronic ignition; Electric garage door opener; Electric shaver; Computers, TV remote control; Electric toaster; Electric Kettle; Electric Garden/Pruning Saw; Food Processor; Refrigerator**;** Washing machine; Dish washer; elevators; automobiles; electric blender;

Advantages of Labour Saving Devices include: saving time and energy, better quality of work, more work can be done within the same time (greater efficiency), high standard of sanitation are possible, and it gives chances to the families to enjoy their leisure time activities, **minimization of cost**

3.3   Effects of Labour Saving Device on Health

Labour Saving Devices provides benefits to individuals, but it also brings significant risks that can threaten their safety which include, fatigue, exposure of dangers from radiation., eye problems due to continuous looking at computer screens, electric shocks, a sedentary lifestyle that can contribute to obesity, diabetes, heart disease, some types of cancer, osteoporosis, and osteoarthritis.

The misuse and abuse of these devices also lead to much health associated problems. However, these can be resolved by using the devices only for the intended purpose and moderately.

SELF-ASSESSMENT EXERCISE

i.   What are Labour saving devices?
ii.   Give examples of labour saving devices?
iii.   Advantages of labour saving devices?

4.0   CONCLUSION

In this unit you have learnt about Labour saving devices and its effect on health. The information and knowledge you acquired from this unit and consultations you made going over texts and looking over the online links were meant to enhance your understanding of labour saving devices. Your performance in the self-assessment exercises will indicate to you your strength and weakness in this unit. Therefore, you are encouraged to go over the unit with more careful detailed attention

5.0   SUMMARY

In this unit, you have learnt, labour saving devices, examples of LSD, advantages of LSD and its effect on the health and general wellbeing of an individual. Even though Labour saving devices have so many advantages, unexpected problems, can be avoided if they are used moderately and wisely because they will definit\\ely reduce our stress levels.

6.0 TUTOR-MARKED ASSIGNMENT

1. What are the effects of labour saving Device on health?

7.0   REFERENCES/FURTHER READING

Dake, F.A.A., & Fuseini, K., (2015). "Recreation, transportation or labour saving? Examining the association between household asset ownership and body mass index among Ghanaian women". *BMC Obesity,* 2, 45. https://doi.org/10.1186/s40608-015-0075-z

Ezeh, C., & Ezeh, O.H., (2019). "Factors Influencing the Preference for Labour Saving Devices Among Rural Women in Kaduna State, Nigeria".*Developing   Country   Studies*,   9(8):   45-50. https://doi.org/10.7176/DCS

Nambiar, M., (2020)."Labour Saving Devices Are Supposed To Make Our Lives Easier | Band 9 IELTS Essay Sample". https://www.ielts-practice.org/labour-saving-devices-are-supposed-to-make-our-lives-easier-band-9-ielts-essay-sample/ Accessed, 17th March, 2021

The Best of Health, (2017). "Hi-Tech Labour Saving Devices – Blessing or Burden?"https://www.thebestofhealth.co.uk/health-conditions/wellbeing/high-tech-labour-saving-devices/   Accessed, 17th March, 2021

Wiklund, P., (2016)."The role of physical activity and exercise in obesity and weight management: Time for critical appraisal". *Journal of Sport and Health Science,* 5(2): 151-154, https://doi.org/ 10.1016/j.jshs.2016.04.001.