**Model four Assignment**

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**Postgraduate Diploma in Public Health**

**Course code: PGD007**

1. **(a) What is mental illness?**

Mental illness refers to collection of conditions or experiences that do not allow an individual to function at his or her best and affects the ways an individual thinks, feels and act. Feeling down, tense, angry or anxious are all normal emotions and it’s OK to experience them. But when these feelings persist for long periods of time, they may be part of a mental health problem. Mental health problems can influence how one thinks and feels, ability to do everyday activities (school, study or work) or in relationships. According to world health organization, mental illness account for more disability in the developed countries than any other group of illnesses, including cancer and heart disease. The most common mental illnesses in adults are anxiety and mood disorders. These disorders are often associated with chronic diseases, including cardiovascular disease, diabetes, asthma, epilepsy, and cancer. People with mental illness have an increased risk of;

* Injuries both intentional and unintentional.
* Use tobacco products and abuse alcohol and other drugs than people without mental illnesses.

**(b) Briefly describe the major categories of mental illness and their treatment?**

The major categories of mental illness as listed in surgeon general‘s reports of mental health in 1999 include the following;

* Anxiety
* Psychosis
* Disturbances of mood
* Disturbances of cognition

**Anxiety**

Anxiety is a vitally physiological response to dangerous situations that prepares one to evade or confront a threat in the environment. Inappropriate expressions of anxiety exist if the anxiety experienced is disproportionate to the circumstance or interferes with normal functioning. Anxiety disordersare the most prevalent mental disorders in adults. These include panic disorders, agoraphobia (anxiety about being in situations from which escape might be difficult), generalized anxiety disorder, specific phobia, social phobia, obsessive-compulsive disorder, acute stress disorder, and post-traumatic stress disorder (PTSD). One-year prevalence of anxiety disorders among adults is about 18 percent, and there is significant overlap with mood and substance abuse disorders.

Females have a higher rate than males of most anxiety disorders. Some anxiety disorders, like panic disorder, appear to have a strong genetic basis. Others are more rooted in stressful life events.

Many veterans of the Iraq and Afghanistan wars suffer from PTSD. They may experience flashbacks to the traumatic events, have nightmares, or feel stressed and angry during the day, making it hard for them to do daily tasks, such as sleeping, eating, or concentrating. In August 2012, President Obama signed an executive order to strengthen access to mental health care for veterans, including suicide prevention efforts.

**Treatment of Anxiety disorders**

Anxiety disorders are treated with some form of;

* counseling or psychotherapy or
* drug treatment

**Psychotherapy**

There are two types of psychotherapies: prolonged exposure (PE) therapy and cognitive processing therapy (CPT).

* PE involves helping people confront their fear and feelings about the trauma they experienced in a safe way through mental imagery, writing, or other ways.
* CPT, the patient is asked to recount his or her traumatic experience and a therapist helps him or her redirect inaccurate or destructive thoughts about the experience

**Drug Treatment**

* The anxiety drugs are aim at stabilizing the level of two of Neurotransmitters the GABA and serotonin that influence an individual mood.

**Psychosis**

Disorders of perception and thought process are considered to be symptoms of psychosis. They are most characteristically associated with **schizophrenia**, but psychotic symptoms can also occur in severe mood disorders. Among the most commonly observed psychotic symptoms are:

* Hallucinations are sensory impressions that have no basis in reality. Example a person hears, sees and, in some cases, feels, smells or tastes things that aren't there; a common hallucination is hearing voices.
* Delusions are false beliefs held despite evidence to the contrary, such as paranoia. For example, thinking your next door neighbor is planning to kill you.

**Schizophrenia**, which affects about 1 percent of the population, is characterized by profound disruption in cognition and emotion, affecting language, thought, perception, affect, and sense of self. Symptoms frequently include hearing internal voices (hallucinations) and holding fixed false personal beliefs (delusions). Onset generally occurs during young adulthood, although earlier and later onsets do occur. Twin and other family studies support the role of genetics in schizophrenia. Immediate biological relatives of people with the condition have about 10 times greater risk than that of the general population. However, only about 40 to 65 percent of identical twins of someone diagnosed with schizophrenia have the disorder, indicating that environmental factors play a likely role.

**Treatment of Psychosis**

Treatment for psychosis involves using combination of**;**

* Antipsychotic medication- which can help relieves the symptoms of psychosis.
* Psychological therapies- the one-to- one talking therapy cognitive behavioral therapy (CBT) has proved successful in helping people with schizophrenia; in appropriate cases, family therapy has been shown to reduce the need for hospital treatment in people with psychosis.
* Social support-support with social needs such as education, employment or accommodation.

**Disturbance of Mood**

Disturbances of mood characteristically manifest themselves as a sustained feeling of sadness or hopelessness (**major depression)** or extreme fluctuations of mood (**bipolar disorder)**. Mood disturbances are also associated with symptoms like disturbances in appetite, sleep patterns, energy level, concentration, and memory. Mood disorder is often associated with thoughts of suicide. Mood disorders, including major depression and bipolar disorder, are a major cause of disability. Bipolar disorder and major depression are more prevalent in women than men. The National Comorbidity Study found a lifetime prevalence of nearly 4 percent for bipolar disorder. About half of those with a primary diagnosis of major depression also have an anxiety disorder. Substance use disorders are also common in individuals with mood disorders. The relative importance of biological and psychosocial factors varies across individuals and across different types of mood disorders. Genetic factors are strongly implicated in bipolar disorder.

**Treatment of mood Disorders**

* Drugs, there are four classes of antidepressants and mood stabilizers effective in the treatment of mood disorders such as lithium.
* Psychotherapy is often added to pharmaceutical treatment.
* Electroconvulsant shock therapy is used for severe depression.

**Disturbance of cognition**

The ability to organize, process, and recall information, as well as to execute complex sequences of tasks, may be disturbed in a variety of disorders. Notably, Alzheimer’s disease is a progressive deterioration of cognitive function, or dementia.

1. **Explain how social factors affect the health outcomes of an individual’s/Communities?**

A number of Social factors have been found to influence health, some of which may have a role in the health effects of socioeconomic status. The social factors that affect the health of an individual or community include;

* **Stress**

Stress is due to the adverse physical and social conditions associated with lower SES, which may act both directly, by affecting physiological processes, and indirectly, by influencing individual behavior.

Early evidence of the health effects of stress came from observations that widows and widowers seemed to have an unusually high risk of dying soon after the death of their spouses. Studies in the 1960s and 1970s found that mortality rates of survivors are 40 percent to 50 percent higher during the six months after the death of a spouse compared to the mortality of married people of the same age. Other stressful life events such as death of other family members, divorce, and loss of a job, all of which were found to increase the risk of illness or death.

* **Working condition**

Stress at work place is well established as a contributor to heart disease, a relationship that has been demonstrated in a variety of epidemiologic studies. A study of the male employees of two banks, one bank changed its management policies to become commercial. The employees of the commercial bank had to deal with considerable competition, risk, and responsibility for investing funds. Employees of the other bank, a semipublic savings bank, had less competition and fewer responsibilities. Over a 10-year period, the employees of the commercial bank were found to have 50 percent higher rates of heart attacks and sudden death. A 1991 experiment on humans demonstrated that stress suppresses the immune response in humans also. Investigators measured levels of psychological stress in 420 healthy volunteers, and then administered nasal drops containing cold viruses to all but a small control group. They found that the subjects whose stress levels were higher were more likely to be infected with cold viruses and more likely to develop colds.

* **Level of socioeconomic status**

Higher income and education provide resources that help to buffer the impact of life’s hassles, thereby protecting health. Education is important because it provides the information and skills to solve problems while Money, of course, can solve a multitude of problems. However, low socioeconomic status, exposes people to greater life stress leads to inability to pay landlords rent checks, child care and good food. These minor but constant stresses may be as debilitating as such major life events as deaths in the family.

* **Social support**

Social support Proves to be surprisingly significant in determining an individual’s health. Family and friends can help by providing both emotional and instrumental assistance. Absence of social support increase coronary heart disease, complications in pregnancy and delivery, suicide, and other unhealthy outcomes. The influence of social support on health came from an epidemiologic cohort study conducted on residents of Alameda County in California. Persons aged 30 to 69 were surveyed in 1965 on their physical, mental, and social well-being as well as their health-related habits such as exercise, use of cigarettes and alcohol, their social networks, marital status and number of close friends or relatives, church membership, and affiliation with other organizations. Death certificates were then monitored over the next 9 years to assess mortality rates and, in 1974, a follow-up survey was conducted on survivors to assess their health status.

* **Level of social network**

The study, as expected, found a strong association between certain unhealthy behaviors and higher mortality rates. More surprising, the study also found that an individual’s health status and risk of dying were strongly associated with the extent and nature of his or her social network. This was true for both men and women and for individuals of high SES and low SES. The association remained true even after unhealthy behaviors were taken into consideration. Throughout the socioeconomic spectrum, men and women with few social contacts had mortality rates two to three times higher than those with many social connections.

1. **Explain how psychosocial factors affect the health behavior?**

Individual behavior plays a major role in determining a person’s health, many factors influence individual behavior. Humans are social creatures, and their behavior is strongly affected by their social environment. This accounts, at least in part, for the fact that diseases tend to be distributed in the population according to certain patterns: Certain groups have characteristic disease patterns that remain constant over time even when individuals in the group change. It is Efficient to try to change the social environment that influences people to behave in unhealthy ways than to try to change people’s behavior one individual at a time.

* **Demographic factors**

Demographic factors—including race, gender, and marital status—are consistently found to influence health. Statistics show that most ethnic minorities in the United States have significantly higher mortality rates from most diseases than whites.

Males have higher mortality rates than females at all ages, although females tend to suffer more from chronic illness.

Married people are in general healthier than people who are not married, whether single, separated, widowed, or divorced.

* **Socioeconomic status**

This Includes income, education, and occupational status factors that is strongly associated with each other. SES accounts not entirely, for the health differences by race, sex, and marital status. For example, blacks tend to be less healthy than whites, and they generally have lower SES than whites. However, even wealthy, educated blacks have higher mortality rates than whites of comparable SES.

The lowest SES have the highest mortality rates, a fact that is true in many different countries and has been true for centuries, for reasons known and unknown. In London in 1665, the poor were more likely to die in the plague epidemic because of poor nutrition and sanitation and because they could not flee the city to escape infection as the wealthy did. In the United States today, the health of the poor is threatened by the adverse environmental conditions of the inner cities, such as lead paint and air pollution, crime, and violence. Poor people also have poorer nutrition, less access to medical care, and more psychological stress.

People with higher SES are healthier, educated people behave in healthier ways. For example, in 2013, 25.8 percent of Americans without a high school diploma smoked, while of those with a bachelor’s degree or higher, only 7.7 percent smoked. Those with more education were also more physically active. the Whitehall Study questioned subjects about their habits and found that those in higher employment grades were less likely to smoke, more likely to exercise, and more likely to eat a healthful diet that included skim milk, whole grains, and fresh fruits and vegetables.

* **Medical Care**

Medical care is another factor that has been blamed for some of the socioeconomic differences in health. In the United States, where 15 percent to 20 percent of the population—mostly those in low socioeconomic groups—lacks health insurance, it was often argued that universal health insurance could reduce health inequalities. The British civil servants in the Whitehall Study all had the same medical coverage by the National Health Service; yet the mortality risks were still higher at lower employment grades, even when behavioral factors were taken into consideration.

1. **Identify and explain three Major threats to public health?**

The three major threats to public health including the following;

* Tobacco smoking
* Poor Diet
* Physical inactivity

**Tobacco smoking**

Cigarette smoking -the leading actual cause of death in the United States-is clearly the world’s most significant public health issue. The problem of tobacco-caused disease embodies the complex interactions by which psychological, social, cultural, economic, and political factors influence individual behavior to cause over 480,000 deaths each year. The struggle to understand and deal with tobacco-caused illness involves all areas of public health. Epidemiology provided the first solid evidence that smoking caused cancer and heart disease. In recent years, smoking has increasingly been seen as an environmental health threat, producing indoor air pollution that has been shown to cause adverse health effects in nonsmokers. Smoking is a behavior, and thus the social and behavioral sciences must provide insights into why people smoke and how they can be persuaded to quit. The following are the diseases known caused by smoking; Lung cancer, Coronary heart diseases, cardiovascular disease, Pneumonia, influenza or Tuberculosis, Chronic Obstructive Pulmonary disease, Sudden infant death syndrome and so on

Public health faces a fundamental dilemma in confronting the current epidemic of tobacco-caused diseases: Political and economic forces that favored tobacco have opposed strong government measures against cigarettes. Public health efforts involving education and health promotion campaigns have persuaded many people to stop smoking but seem to have reached the limit of their effectiveness in bringing smoking prevalence down to about 18 percent among adults. 1990s saw a major shift in federal and state governments’ attitudes toward smoking. Recognition that the nicotine in tobacco is addictive, together with evidence that cigarette companies have purposely manipulated nicotine levels in cigarettes to keep people hooked, has forced politicians to look with suspicion on what was previously considered a freely chosen behavior. The high economic costs paid by government-financed programs, for the treatment of tobacco-caused disease has forced governments to question their assumptions on the economic advantages of supporting the tobacco industry.

**Biomedical base of smoking’s harmful effects**

Cigarettes smoking deliver **nicotine,** an addictive drug. Nicotine is absorbed by the linings of the mouth and the respiratory tract and travels rapidly to the heart and then to the brain. The drug produces a sense of enhanced energy and alertness, while also having a calming effect on addicted smokers. When people try to quit smoking, they experience withdrawal reactions with unpleasant physical and psychological symptoms.

Another component of tobacco smoke is **tar**, the residue from burning tobacco that condenses in the lungs of smokers. Tars provide the flavor in cigarette smoke; they are also a major source of its **carcinogenicity.** In early 1930s, experiments were done in which tars were painted on the ear linings of rabbits or the shaved backs of mice found to cause tumors. Decades of studies by biomedical researchers have confirmed the carcinogenicity of the tars as well as other ingredients of the smoke, including arsenic and benzene. Tars contribute to other lung diseases through their tendency to damage cilia, the tiny hairs on the linings of the respiratory tract that sweep the lungs and bronchi clear of microbes, irritants, and toxic substances. Damage to cilia and irritation of respiratory tract linings by components of smoke increase susceptibility to infectious diseases like bronchitis, influenza, and pneumonia as well as to diseases brought on by chronic irritation such as emphysema and **asthma.**

The effect of smoking on the cardiovascular system is very rapid. The nicotine in cigarette smoke raises blood pressure and heart rate. It may also cause spasms in the blood vessels of the heart, especially if damage already exists, increasing the risk of sudden cardiac death. Carbon monoxide in cigarette smoke interferes with the oxygen-carrying capacity of red blood cells, leading to oxygen shortages in the hearts of patients suffering from coronary artery disease. Smoking increases the risk of stroke and heart attacks by altering the clotting properties of blood. Components of cigarette smoke also have been shown to raise total blood cholesterol levels and reduce levels of HDL, the “good” cholesterol.

**Poor Diet**

Humans had to exert a great deal of physical activity such as digging and harvesting to obtain their food, however, Over the past century increasing percentage of the population had access to an excess of food with no need to exercise. This imbalance has made people becoming fatter, an exceedingly unhealthy trend. Today, poor diet has been ranked second among the factors identified as leading actual causes of death in the United States, although the analysis is controversial.

Studies have shown that weighing too much increases people’s risk of cardiovascular disease, diabetes, most kinds of cancer, and a variety of other diseases. The interest of public health is to reduce the prevalence of overweight and obesity, which in 2009–2012 affected 68.7 percent of the adult population. Getting people to lose weight seems to be even more difficult than getting them to quit smoking. 2005–2006 **National Health and Nutrition Examination Survey (NHANES)**, 57 percent of women and 37 percent of men are trying to lose weight, most of them unsuccessfully. An Institute of Medicine report on the problem states, “It is paradoxical that obesity is increasing in the United States while more people are dieting than ever before, spending, by one estimate, more than $33 billion per year on weight;

* Reduction products, including diet foods and soft drinks, artificial sweeteners, and diet books.
* Services such as fitness clubs and weight loss programs.

**Obesity** is caused by unhealthy eating patterns combined with inadequate physical activity, each a factor that influences people’s health whether or not they weigh too much. Most analyses find that Americans eat too much protein and fat and too few fruits and vegetables. This pattern contributes to;

* High levels of cholesterol and other blood lipids and to high blood pressure risk factors for cardiovascular disease.
* Breast and colon cancer risks are greater in populations that eat diets high in meat and low in fruits and vegetables.
* Type 2 diabetes, which is often brought on by obesity and which can usually be controlled by careful eating.
* Osteoporosis, a debilitating disease of the elderly, especially white women, is likely to become increasingly due to lack of enough calcium, best obtained in low-fat dairy products.

The federal government, in a number of reports over the years by various advisory committees, has developed recommendations on how Americans should eat to maintain health and prevent chronic disease. Since 1980, the U.S. Department of Agriculture and the U.S. Department of Health and Human Services have reviewed the recommendations every five years and have released reports **called *Dietary Guidelines for Americans****.* However, in 2010 the recommendations were reviewed and include the following;

* People’s diets should emphasize on fruits, vegetables, whole grains, and fat-free or low fat milk and milk products.
* Should include lean meats, poultry, fish, beans, eggs, and nuts but less saturated fats, trans-fats, cholesterol, salt, and added sugar.

**Obesity** is a complex condition, influenced by genes as well as by many individual and social factors that includes eating patterns. In the public health perspective, obesity is usually defined more precisely in terms of **body-mass index (BMI)**. BMI is calculated by dividing a person’s weight in kilograms by the square of his or her height in meters. Most studies show that weight-associated health risks begin to appear at a BMI of about 25, and rise more significantly above 30, with the risks increasing in proportion to the severity of an individual’s obesity. The National Institutes of Health and the Centers for Disease Control and Prevention (CDC) have agreed on a definition of **overweight** as a BMI between 25 and 29.9 and **obesity** as a BMI of 30 or greater. Using this definition, 72.9 percent of men and 64.6 percent of women 20 years of age and older were found to be overweight or obese in the National Health and Nutrition Examination Survey (NHANES) conducted between 2009 and 2012.The prevalence of obesity was 34.6 percent in men and 35.9 percent in women. The distribution of fat on the body makes a difference, Obesity researchers distinguish between apple-shaped people and pear-shaped people, and they have found health risks to be greater for those shaped like apples. People who gain weight in the abdominal area, as men usually do, have a higher risk of cardiovascular disease and diabetes than people who gain weight in the hips and buttocks—a pattern more common in females. Fat distribution is measured as a **waist-to-hip ratio (WHR)**, with the waist measured at the smallest point and the hips at the widest point around the buttocks. Health risks in men who have a WHR more than 1.0 and women whose WHR is more than 0.8 are greater than the risks due to excess weight alone.

Overweight among children has been increasing steadily since the 1960s. Definitions of overweight and obesity in children are complex calculations, based on growth curves of BMI for age. The CDC identifies children as overweight if they are at or above the 85th percentile on growth curves and as obese if they are above the 95th percentile. The prevalence of overweight and obesity among children and adolescents 6 to 19 years old increased from under 5 percent in the earliest surveys to more than 34 percent in the 2011–2012 NHANES. Children who are fat are likely to become fat adults and suffer the concomitant risks of chronic disease. A study that tracked 679 school children for 16 years found that weight during childhood was a good predictor of whether an adult would exhibit risk factors for cardiovascular disease and diabetes. The Effects of Obesity in children include;

* Increase risks of type 2 diabetes, which is sometimes called “adult-onset diabetes” because until recently it was believed to occur almost exclusively in adults.
* Complications of childhood obesity involve virtually every organ, including the cardiovascular system, the respiratory system, the kidneys, the gastrointestinal system, and the musculoskeletal system.
* Obesity in children also tends to cause psychological problems such as depression, anxiety, social isolation, and low self-esteem.
* Children who are worried about their weight may undertake diets that affect their physical as well as their psychological health, and they are at increased risk for eating disorders such as anorexia and bulimia.
* Obese children are less likely than thinner ones to complete college and are more likely to live in poverty.

**Factors that influence Obesity**

* **Racial difference**

There are significant racial differences in the prevalence of overweight among women: 81.8 percent of non-pregnant black women are overweight, compared with 60.9 percent of white women. Among men the differences are smaller, 70.2 percent of black men compared with 73.2 percent of white men are overweight. The health effects of overweight and obesity are less marked among blacks. The risks of excess weight are known to be higher for Asian populations; so the BMI cutoffs recommended by the World Health Organization are lower for them. Overweight increases with age, but begins to decline in the age group 75 years and older.

* **Socioeconomic status**

Socioeconomic status has a significant influence on the prevalence of obesity. College graduates of both sexes are thinner than men and women with fewer years of education. The difference is especially significant among females: Those with less than 12 years of education are nearly twice as likely to be overweight than female college graduates. Among men, the relationship of obesity with education is less clear.

**Promoting healthy eating**

Public health advocates have attempted to apply the ecological model of health behavior to create a social environment that favors healthier eating. These include;

* Making nutritious foods more readily available—intervention at the community and institutional levels—should encourage people to choose their foods more wisely.
* The food industry is responding to many consumers’ concerns about weight and health by providing a greater choice of low-fat and low-calorie foods.
* Restaurants offer “heart healthy” selections on the menu.
* Worksite and school cafeterias provide healthy food choices including salad bars.
* Enhancing self-efficacy and providing social support, promoting healthy eating at the level of the individual and his or her family and friends.
* “Point of choice” postings of nutritional information, major campaigns using point of choice postings have been conducted by supermarket chains in collaboration with health advocacy organizations such as the American Heart Association.

**Physical Inactivity**

Many studies on losing weight have found that the most effective approach combines dieting and physical activity. Dieters who are physically active are more likely to lose fat while preserving lean mass. This promotes a healthier distribution of body weight (a lower WHR) and Helps people avoid the weight loss plateaus that can result from dieting.

Epidemiologic studies have demonstrated that people who are more physically active live longer. A study of almost 17,000 male Harvard alumni found that those who engaged in vigorous activities for three or more hours per week were less than half more likely to die within the 12-to 16-year follow-up period than those who had the lowest activity levels. Among Harvard graduates who were sedentary at the beginning of the study, those who took up moderate sports activity at some time during the follow-up period had a 23 percent lower death rate than those who remained sedentary. The Framingham Study found, as early as the 1970s, that the risk for both men and women of dying from cardiovascular disease was highest among those who were the least physically active and that more activity was associated with lower risk. Exercise offers protection against both heart disease and stroke, inactive men and women are more likely to develop high blood pressure than those who are active and that moderate intensity exercise may help reduce blood pressure in people whose pressure is elevated.

**Benefits of exercising**

The biomedical evidence for how physical activity protects against cardiovascular disease include the following;

* The effects on blood cholesterol, especially the tendency for exercise training to increase levels of high-density lipoprotein, “the good cholesterol.” Even a single episode of physical activity has been found to improve the balance of blood lipids, an effect persisting for several days.
* By lowering cholesterol levels in the blood, exercise protects against atherosclerosis. Studies on monkeys have demonstrated that exercise has a protective effect even when the animals are fed a diet high in cholesterol and fats.
* Favorable effects of physical activity on the cardiovascular system include a lowering of blood pressure, an increase in circulation to the heart muscle, and a reduced tendency of blood to form clots.
* Physical activity reduces the risk of diabetes, which is an important risk factor for cardiovascular disease. Type 2 or adult - onset diabetes is related to weight gain in adults, especially weight gain distributed in an “apple” shape, a consequence of insufficient physical activity.
* The protective effect of exercise against the development of diabetes seems to work largely by increasing the sensitivity of muscle and other tissues to insulin.
* Physical activity protects against cancer, especially colon cancer and breast cancer. Some studies suggest a protective effect against cancer of the lung, prostate, and uterine lining.
* Exercise also improves survival and quality of life among individuals who have been diagnosed with several kinds of cancer.

**Television and computers** may be important factors in children’s physical inactivity. A number of studies have found that childhood obesity is positively associated with time spent watching TV. The American Academy of Pediatrics recommends no more than 2 hours per day of recreational screen time for children 2 years and older and none for younger children. Surveys have found that American children age 8 to 18 spend an average of 7 hours of screen time per day, children 5 years old and younger spend 2 hours per day on average. Children with a television in their bedroom are especially likely to overweight. Television encourages;

* Physical inactivity.
* Snack consumption, children are bombarded with television commercials for non-nutritious food products.

**Recommended amount of physical activity for both children and adults**

In 2006, the **U.S. Department of Health and Human Services** decided that guidelines for physical activity should be developed. Together with the Institute of Medicine, it undertook a process similar to that used to develop the dietary guidelines. An advisory committee analyses the scientific information and held a series of meetings, and released a report in 2008. Guidelines were developed for children and adolescents (**60 minutes or more daily**) and adults (**at least 150 minutes per week of moderate-intensity activity or 75 minutes per week of vigorous-intensity aerobic activity.** Adults gain increased benefits from 300 minutes of moderate-intensity activity or 150 minutes of vigorous activity. Adults should also do muscle strengthening exercise two days a week. Older adults and people with disabilities or chronic medical conditions should do as much as they are able, in consultation with their doctor.

**Promoting physical activity**

The effective approach to promoting physical activity is likely to employ the ecological model, intervening at a number of levels of influence. Efforts to motivate individuals to be more active must be combined with interventions that make the physical and social environment more conducive to physical activity. The following are the intervention to promote physical activity;

Many organizations and federal agencies recommend that healthcare providers counsel their patients about physical activity. Studies of the effectiveness of counseling find that counseling practices of primary carephysicians are highly variable, from a brief recommendation to be more active to a referral for intensive counseling by health educators.

**Community-wide campaigns** that include improving access to places for physical activity and using group settings to help people set individual goals, teaching skills for incorporating activity into daily routines, and providing social support to people trying to adopt healthier behaviors.

**Health promotion programs** build walking trails or persuade shopping malls to open early for mall walkers. Surveys of bicycle riders suggest that many people would commute to work by bicycle if safe bike paths or bike lanes were available. Community trials designed to increase physical activity—usually as part of a “healthy heart” program—have incorporated such environmental modifications while also employing communications strategies, from public service announcements about physical activity to signs that provide cues to action. “Stay Healthy, Save Time, Use the Stairs” were placed next to an escalator. This measure increased the percentage of people who used the stairs from 8 percent to 17 percentages.

**Pedometers** are increasingly being used in campaigns to motivate people to increase their physical activity. It is recommended that healthy adults should walk about 10,000 steps a day, which is about 5 miles, a requirement that would more than fulfill the minimum federal recommendation of about 150 minutes of moderate intensity physical activity per week. For less active people is to measure their current number of steps and gradually increase the number until the goal is reached. A 2007 review of the effectiveness of pedometers in increasing physical activity found that people who wore the instruments did, in fact, increase the number of steps they took by an average of about 27 percent. Significantly these individuals reduced their BMI and blood pressure. Other fitness tracking devices such as the Fitbit and the Apple Watch have recently become available on the market.

**Public health advocates for wide physical activity in children and adolescents**. Most young children engage in physical activity because they enjoy it. One strategy for promoting exercise is to encourage children to play Outdoors. A U.S. Census Bureau report published in 2007 found that 34 percent of black and 39 percent of Hispanic parents keep their children inside because they believe it is too dangerous to allow them to play outside. A study conducted in two low-income neighborhoods in New Orleans. Researchers opened a schoolyard and provided attendants to ensure children’s safety. They observed that the number of children who were outdoors and physically active in the schoolyard and the surrounding neighborhood was 84 percent higher than in a comparison neighborhood. Surveys found that the children in the intervention neighborhood spent less time watching television or movies or playing video games than children in the comparison school.

**Walking or biking** to school is another straightforward way to increase children’s physical activity. Less than 16 percent of students aged 5 to 15 years walked or biked to school in 2001, in contrast to 48 percent of children in 1960. Much of this difference is determined by the distance a child must travel to get to school, a factor that communities could consider when new schools are built.

P**hysical education classes** teach school-age children about the health benefits of physical activity and help them to develop skills that can be applied in lifelong physical fitness activities, such as jogging, tennis, and aerobic dance. For example, one experimental program in a California middle school with predominantly black and Hispanic students was called “Dance for Health.

Regular physical education classes were replaced with moderate- to high-intensity aerobic dance, accompanied by popular music recommended by the students themselves. At the end of the 3-month program, participating students had lower BMIs and a more positive attitude toward physical activity than a control group.

**A youth development program** focused on American Indian young people, who are particularly prone to obesity, type 2 diabetes, and suicide, is called Wings of America. Wings of America uses running as a catalyst for empowering youth to take pride in themselves and their culture. The organization sponsors cross-country teams, runs youth development summer camps, and provides speakers and other assistance for wellness programs, conferences, clinics, and fairs.

1. **What are some of psychosocial interventions for mental health and substance used disorders in your country?**

Mental health and substance used intervention in south Sudan is under development with the help World health organization and other international nongovernmental organization such IMC. Since independence in 2011, South Sudan has experienced frequent and severe bouts of conflicts and violence spurred political instability. The resulting internal conflicts have displaced thousands over the country leading to highly vulnerable population experiencing trauma and stress. There is evidence to suggest high rate of anxiety disorders such as general anxiety disorder (GAD) and post-traumatic stress disorders (PTSD) can range between 3-28% among south Sudanese who stay in the country post conflicts. In its health policy, the government indicated that it sees the mental health as essential component of public health, leading efforts to integrate packages of care within essential services.

International medical corps has been working in South Sudan for more than 20 years providing lifesaving services to people affected by war including IDPS, Refugee and host communities. AS UNCHR main partner, International medical corps has been providing mental health and psychosocial supports to refugees in Maban camp since 2014 with the following intervention;

Comprehensive community based MHPSS services including provision of integrated mental health care in the primary health centres.

* Refugees with pre-existing and emergency include included priority mental, neurological and substance use disorders receive pharmaceutical and psychosocial support services.
* Capacity building of general health care staffs with support supervision from a mental health specialist.
* Community outreach services provided by trained community volunteers.

Impacts of the mental health and psychosocial support interventions. The following are the impacts;

* Enrolled and provided mental health assessment and services to 3,500 mental health clients, living in refugee Camp in Maban, South Sudan.
* Approximately 92% of clients reported reduction in the severity of the symptoms as well improved functioning. ***A quote from a client “I can now cook for my children, bring water from the river, go to the forest to collect wood…Earlier I never used to do this…when I was sick…”Female enrolled in MHPSS programme***
* Provided mental health trainings and supervision to 661health and community workers according to national, WHO MH GAP and PFA guides.
* Promoted mental health key awareness massages to 37,081 people through community outreach program.

1. **Describe two psychological models for health behavior?**

Psychological models are theories put by social and behavioral scientist attempting to explain how the psychosocial factors affect the health –related behavior. Public health does not have much power to change people’s SES, stressful life events, or social networks, it is hoped that understanding how these factors affect health may permit more effective interventions to promote healthier behavior. Some of these theories focus on individual psychology, while others attempt to explain the effect of the social environment on individual behavior. The goal of these analyses is to understand the most effective ways to promote healthier behavior.

**Health belief model**

This is the classic frame of reference for understanding health behavior, and especially behavior change. The health belief model specifies several factors that determine whether a person is likely to change behavior when faced with a health threat. These factors include;

* The extent to which the individual feels vulnerable to the threat,
* The perceived severity of the threat,
* Perceived barriers to taking action to reduce the risk, and
* The perceived effectiveness of taking an action to prevent or minimize the problem

Based on the health belief model, the public health approach to changing behavior would be to convince people that they are vulnerable, that the threat is severe, and that certain actions are effective preventive measures. For example, surveys of low-income minority women who had not had mammograms found that many had misperceptions about the disease.

* Some women underestimated their susceptibility to breast cancer (factor 1).
* Others were embarrassed or afraid of the pain or radiation involved in a mammogram (factor 3).
* And others felt that cancer was not curable and therefore there would be no point in diagnosing it early (factor 4).

Screening rates among these women could be improved by counseling that included personally tailored messages that addressed the women’s beliefs and concerns.

**Self-Efficacy**

The sense of having control over one’s life, it is an important concept in understanding health behavior.

People who are confident that they can control their lives are said to have high self-efficacy. People who believe their lives are subject to chance or external forces are said to have low self-efficacy. People are more likely to adopt healthy behavior if they are confident that they have the ability to do so. A sense of control is beneficial for health in a number of ways. Clearly, it reduces stress.

A number of studies in both humans and animals have shown that an individual’s perception of the stressfulness of an adverse event can be reduced by two factors:

* Knowledge of when the stressful event will occur and
* The ability to regulate the timing and intensity of the event. This knowledge and ability give the individual a sense of control, or self-efficacy.

The lowest self-efficacy is seen in people (or animals) who have experience of being unable to avoid noxious events, especially if they have repeatedly tried and failed. They may develop a pattern of “learned helplessness,” a pattern described as a “numbed acceptance of a negative situation, so that an individual no longer tries to change that situation for the better because he or she does not expect those efforts to make any difference.

A number of studies have shown that people with high self-efficacy are more likely to engage in health-promoting behavior than those with low self-efficacy. An attitude of learned helplessness is common in people who have repeatedly tried and failed to quit smoking or lose weight.

A great deal of research has been focused on how to increase people’s self-efficacy, thereby helping to motivate them to practice healthy behaviors. An individual’s self-efficacy is increased by;

* Previous successful performance of the behavior in question.
* Seeing others successfully perform the behavior, especially if the observed behavior is being performed by someone similar to themselves.

For example, the most successful school drug prevention programs include role-modeling, small group exercises, and skills practice to teach students how to identify and resist internal and external pressures to use drugs. These programs have been found to be much more effective in enhancing students’ self-efficacy to resist drugs if they are led by older teens, with whom they can identify, rather than by adult health educators.

**Trans-theoretical model**

This is the theory that has proved widely in health education and envisions changes such smoking cessation or adopting healthy diet as process involving progress through series of five stages. These stages include;

* Pre-contemplation
* Contemplation
* Preparation
* Action
* Maintenance
* **Pre-contemplation**

People in the pre-contemplation stage have no intention to change their behavior; the first step in getting them to change involves consciousness rising to increase their awareness that their behavior is unhealthy and should be changed.

* **Contemplation**

The person is more aware of the benefits of change, but is also very aware of the difficulties and barriers to change and still is not ready to take action.

* **Preparation**

This is when a person has decided to make the change and has planned concrete actions he or she could take, such as signing up for a class, discussing the plan with their physician, or buying a self-help book.

* **Action**

The action requires that individuals actually modify their behavior by abstaining from smoking or adhering to a healthier diet.

* **Maintenance**

Maintenance is the stage in which people have achieved the healthier behavior but must strive to prevent relapse. Knowing which stage an individual has reached can help a physician or health educator move him or her along to the next stage.

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