HEALTH PSYCHOLOGY

STUDY MATERIAL

VI SEMESTER (CUCBCSS)

CORE COURSE

For

BSc
COUNSELLING PSYCHOLOGY

(2014 Admission onwards)

UNIVERSITY OF CALICUT

SCHOOL OF DISTANCE EDUCATION

Calicut University P.O. Malappuram, Kerala, India 673 635

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HEALTH PSYCHOLOGY

Module 1

Health psychology is an exciting and relatively new field devoted to understanding psychological influences on how people stay healthy, why they become ill, and how they respond when they do get ill. Health psychologists both study such issues and promote interventions to help people stay well or get over illness.

Health psychology is a specialty area within psychology. Health psychology has been specifically defined as "the aggregate of the specific educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and treatment of illness, and the identification of etiologic and diagnostic correlates of health, illness and related dysfunction and to the analysis and improvement of the health care system and health policy formation". (Matarazzo, 1982). This definition has been adopted by the American Psychological Association (APA), the British Psychological Society and other organizations. It serves as health psychologies' 'official' definition. A recent definition of health psychology has been offered by Brannon and Feist (2000), who state that Health psychology "includes psychology's contributions to the enhancement of health. the prevention and treatment of illness, the identification of health risk factors, the improvement of the health care system, and shaping of public opinion with regard to health"

Health psychology is concerned with all aspects of health and illness across the life span. Health psychologists focus on health promotion and maintenance, the etiology and correlates of health, illness, and dysfunction. Etiology refers to the origins or causes of illness, and health psychologists are especially interested in the behavioral and social factors that contribute to health or to illness and dysfunction. Such factors can include health habits such as alcohol consumption, smoking, exercise, the wearing of seat belts, and ways of coping with stress. Health psychologists also study the psychological aspects of the prevention and treatment of illness. Health psychologists analyze and attempt to improve the health care system and the formulation of health policy. They study the impact of health institutions and health professionals on people's behaviour and develop recommendations for improving health care.

Need and significance of health psychology

A number of trends within medicine, psychology, and the health care system have combinedto make the emergence of health psychology inevitable. The factors led to the development ofhealth psychology are

Changing Patterns of Illness

The most important factor giving rise to health psychology has been the change in illnesspatterns that has occurred in the United States and other technologically advanced

societies.Untilthe 20th century, the major causes of illness and death in the United States were acute disorders, especially tuberculosis, pneumonia, and other infectious diseases. Acute disorders are short-termillnesses, often the result of a viral or bacterial invader and usually amenable to cure. Now,however, chronic illnesses —especially heart disease, cancer, and diabetes—are the maincontributors to disability and death, particularly in industrialized countries. Chronic illnesses areslowly developing diseases with which people live for a long time. Often, chronic illnesses cannotbe cured but rather only managed by patient and health care provider. These are diseases in whichpsychological and social factors are implicated as causes. For example, personal health habits, suchas diet and smoking, are implicated in the development of heart disease and cancer, and sexualactivity is critical to the likelihood of developing AIDS (acquired immune deficiency syndrome).

Consequently, health psychology has evolved, in part, to explore these causes and to develop waysto modify them. People may live with chronic diseases for many years; psychological issues arisein connection with them. Health psychologists help the chronically ill adjust psychologically andsocially to their changing health state. They help those with chronic illness develop treatmentregimens, many of which involve self-care. Chronic illnesses affect family functioning, includingrelationships with a partner or children, and health psychologists both explore these changes andhelp ease the problems in family functioning that may result.

Advances in Technology and Research

The field of health psychology is changing almost daily because new issues arise that require the input of psychologists (Saab et al., 2004). For example, new technologies now make itpossible to identify the genes that contribute to many disorders. Just in the past few years, genescontributing too many diseases, including breast cancer, have been uncovered. Health psychologistsconduct research that identifies the risk factors for disease, such as a high-fat diet, and help peoplelearn to change their diet and stick to their program. Helping people make informed, appropriate decisionsis fundamentally a psychological task. Advances in genetic research have made itpossible to identify carriers of illness and to test a fetus for the presence of particular lifethreatening or severely debilitating illnesses. This places some parents in the position of having todecide whether to abort a pregnancy—a wrenching, difficult decision to make. Certain treatmentsthat may prolong life may also severely compromise quality of life. Increasingly, patients are askedtheir preferences regarding life-sustaining measures, and they may require counseling in thesematters. These are just a few examples of the increasing role that patients play in fundamentaldecisions regarding their health and illness and its management, and of the help healthpsychologists can provide in this process.

The Role of Epidemiology in Health Psychology

Changing patterns of illness have been charted and followed by the field of epidemiology, adiscipline closely related to health psychology in its goals and interests (Miller, 1992).Epidemiology is the study of the frequency, distribution, and causes of infectious andnoninfectious disease in a population, based on an investigation of the physical and socialenvironment. For example, epidemiologists study not only who has what kind of cancer but alsowhy some cancers are more prevalent than others in particular geographic areas or among particulargroups of people. With the help of epidemiology health psychology is concerned not only withbiological outcomes but also with health-related quality of life and symptomatic complaints. Healthpsychologists are becoming more involved in the effort to improve quality of life among thosediagnosed with chronic illnesses, so that these individuals may live out their remaining years as freefrom pain, disability, and lifestyle compromise as possible.

Expanded Health Care Services

Another set of factors that has contributed to the rise of health psychology relates to theexpansion of health care services. In recent years, the health care industry has come underincreasing scrutiny as we have realized that massive increases in health care costs have not broughtwith them improvement in basic indicators of quality of health (Tovian, 2004) Moreover, hugedisparities exist in the United States such that some individuals enjoy the very best health careavailable in the world while others receive little health care except in emergencies. Becausecontaining health care costs is so important, health psychology's main emphasis on prevention—namely, modifying people's risky health behaviors before they become ill—has the potential toreduce the number of dollars devoted to the management of illness. Health psychologists have donesubstantial research on what makes people satisfied or dissatisfied with their health care. Thus, theycan help in the design of a user-friendly health care system. The health care industry employs manymillions of individuals in a variety of jobs. Nearly every individual in the country has direct contactwith the health care system as a recipient of services. Thus, its impact on people is enormous. Forall these reasons, then, health has a substantial social and psychological impact on people, animpact that is addressed by health psychologists.

Increased Medical Acceptance

Another reason for the development of health psychology is the increasing acceptance ofhealth psychologists within the medical community. Although health psychologists have beenemployed in health settings for many years, their value is increasingly recognized by physiciansand other health care professionals. At one time, the role of health psychologists in health care waslargely confined to the task of administering tests and interpreting the test results of individualswho were suspected of being psychologically disturbed. Now, however, caregivers are increasinglyrecognizing that psychological and social factors are important in health and illness. Accordingly,the role of

the psychologist in changing patients' health habits and contributing to treatment isincreasingly acknowledged.

Demonstrated Contributions to Health

Health psychology can make substantial contributions to health. Health psychologists havedeveloped a variety of short-term behavioral interventions to address a variety of health-relatedproblems, including managing pain, modifying bad health habits such as smoking, and managingthe side effects or treatment effects associated with a range of chronic diseases. Techniques thatoften take a mere few hours to teach often produce years of benefit t. Such interventions,particularly those that target risk factors such as diet or smoking, have contributed to the actualdecline in the incidence of some diseases, especially coronary heart disease (McGinnis et al., 1992).

Psychologists learned many years ago that informing patients fully about the procedures andsensations involved in unpleasant medical procedures, such as surgery, improves their adjustmentto those procedures (Janis, 1958; Johnson, 1984). Because of these studies, many hospitals andother treatment centers now routinely prepare patients for such procedures. Ultimately, if adiscipline is to flourish, it must demonstrate a strong track record, and health psychology has doneprecisely that.

Methodological Contributions to Health

Health psychologists make important methodological contributions to issues of health andillness. Many of the issues that arise in medical settings demand rigorous research investigation.Although physicians and nurses receive some methodological and statistical education, theirtraining may be inadequate to conduct research on the issues they wish to address. The healthpsychologist can be a valuable member of the research team by providing the methodological andstatistical expertise that is the hallmark of good training in psychology.

A Brief History of Health Psychology

As an identifiable area, health psychology received its first important impetus in 1973, whenthe Board of Scientific Affairs of the American Psychological association (APA) appointed a taskforce to study the potential for psychology's role in health research. In 1976, this task force (APA)reported that few psychologists were involved in health research and that research conducted bypsychologists in the area of health was not often reported in the psychology journals. However, thereport envisioned a future in which health psychology would help in the enhancement of health andprevention of disease.

In 1978, the American Psychological Association established Division 38, HealthPsychology, as"a scientific, educational, and professional organization for psychologist interestedin (or working in) areas at one or another of the interfaces of medicine and psychology"(Matarazzo, 1994, p.31). In 1982, the journal of Health Psychology began publication as the officialjournal of division 38. Currently, health

Psychology is not only a well established division withinthe American Psychological Association but is also recognized by the American PsychologicalSociety, another powerful professional organization, which emphasizes research over clinicalpractices.

QUALITY OF LIFE

In general, quality of life (QoL or QOL) is the perceived quality of an individual's dailylife, that is, an assessment of theirwell-being or lack thereof. This includes all emotional, social,and physical aspects of the individual's life. Quality of life (QOL) is a broad multidimensionalconcept that usually includes subjective evaluations of both positive and negative aspects of life.

Health-Related Quality of Life and Well-Being

Health-related quality of life (HRQOL) is a multi-dimensional concept that includesdomains related to physical, mental, emotional and social functioning. It is an assessment of howthe individual's well-being may be affected over time by a disease, disability, or disorder. It goesbeyond direct measures of population health, life expectancy and causes of death, and focuses onthe impact health status has on quality of life. A related concept of HRQL is well-being, whichassesses the positive aspects of a person's life, such as positive emotions and life satisfaction.

HRQOL can be distinguished from quality of life that it concerns itself primarily with thosefactors that fall under the purview of health care providers and health care systemsGenerally speaking, then, assessment of HRQOL represents an attempt to determine how variableswithin the dimension of health (e.g., a disease or its treatment) relate to particular dimensions of lifethat have been determined to be important to people in general (generic HRQL) or to people whohave a specific disease (condition-specific HRQL). Most conceptualizations of HRQL emphasizethe effects of disease on physical, social/role, psychological/emotional, and cognitive functioning.Symptoms, health perceptions, and overall quality of life are often included in the concept domainof HRQOL.

Importance of Health-Related Quality of Life and Well-Being

Measuring HRQOL can help determine the burden of preventable disease, injuries, anddisabilities, and it can provide valuable new insights into the relationships between HRQOL andrisk factors. Measuring HRQOL will help monitor progress in achieving the nation's healthobjectives. Analysis of HRQOL surveillance data can identify subgroups with relatively poorperceived health and help to guide interventions to improve their situations and avert more seriousconsequences. Interpretation and publication of these data can help identify needs for healthpolicies and legislation, help to allocate resources based on unmet needs, guide the development ofstrategic plans, and monitor the effectiveness of broad community interventions. HRQOLassessment is a particularly important public health tool for the elderly in an era when lifeexpectancy

is increasing, with the goal of improving the additional years in spite of the cumulativehealth effects associated with normal aging and pathological disease processes.

Measurement of Health-Related Quality of Life and Well-Being

Clinicians and public health officials have used HRQoL and well-being to measure theeffects of chronic illness, treatments, and short- and long-term disabilities. While there are severalexisting measures of HRQoL and well-being, methodological development in this area is stillongoing. Following measures are used for monitoring HRQoL and well-being in the United States:

- Patient Reported Outcomes Measurement Information System (PROMIS) Global Health
- Measure – assesses global physical, mental and social HRQoL through questions on selfrated health, physical HRQoL, mental HRQoL, fatigue, pain, emotional distress, socialactivities, and roles.
- Well-Being Measures – assess the positive evaluations of people's daily lives – when theyfeel very healthy and satisfied or content with life, the quality of their relationships, theirpositive emotions, resilience, and realization of their potential.
- Participation Measures – reflect individuals' assessments of the impact of their health ontheir social participation within their current environment. Participation includes education,employment, civic, social and leisure activities. The principle behind participation measuresis that a person with a functional limitation – for example, vision loss, mobility difficulty, orintellectual disability – can live a long and productive life and enjoy a good quality of life.

BIOMEDICAL MODEL AND BIOPSYCHOSOCIAL MODEL OF HEALTH

The traditional view of Western medicine defines health as the absence of disease (Papas ,Belar, &Rozensky, 2004). This view conceptualizes disease exclusively as a biological process. The biomedical model considers disease to be a simple, almost mechanistic result of exposure to a specific pathogen, a disease-causing organism. This view spurred the development of drugs and medical technology oriented toward removing the pathogens and curing disease. In this view, when the pathogen is removed, health is restored.

The biomedical model of disease is compatible with infectious diseases that were the leading causes of death 100 years ago. Throughout the 20thcentury, adherence to the biomedical modal allowed medicine to conquer or control many of the diseases that once ravaged humanity, When chronic illnesses began to replace infectious diseases as leading causes of death, questions began to arise about the adequacy of the biomedical model (stone, 19870). A few physicians, many psychologists, and some sociologists have become dissatisfied with the biomedical model and have begun to question its usefulness in dealing with the current patterns of disease and death and its definition of health.

An alternative model of health has evolved, one that advocates a holistic approach to medicine. This holistic model considers social, psychological, physiological or even spiritual aspects of a person's health. This alternative model is known as biopsychosocial model, the approach to health that includes biological;, psychological, and social influences. The biopsychosocial model has at least two advantages over the old biomedical model; first, it incorporates not only biological conditions but also psychological and social factors and second, it views health as a positive condition.

According to biopsychosocial view, health is much more than the absence of disease. A person who has no disease condition is not sick, but this person may not be healthy, either. The biopsychosocial model is really asset of beliefs and values about health, illness, psychology and culture that the health psychology discipline has signed up to alongwith its 'official' definition. Although health psychologists frequently arque against the medical model and in favor of the biopsychosocial model (e.g. Broome and Llewellyn, 1995). The majority of health psychology practice still occurs in the context of clinical medicine. In 1946, the United Nations established the World Health Organization (WHO) and wrote into the preamble of its constitution a modern, Western definition: "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." This definition clearly affirms that health is a positive state and not just the absence of pathogens.

Mental health (or behavioral health) describes a level of psychological well-being, or an absence of a mental disorder. From the perspective of 'positive psychology' or 'holism', mental health may include an individual's ability to enjoy life, and create a balance between life activities and efforts to achieve psychological resilience. Mental health can also be defined as an expression of emotions, and as signifying a successful adaptation to a range of demands. The World Health Organization defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community". It was previously stated that there was no "official" definition of mental health. Cultural differences, subjective assessments, and competing professional theories all affect how "mental health" is defined.

There are different types of mental health problems, some of which are common, such as depression and anxiety disorders, and some not so common, such as schizophrenia and bipolar disorder. Evidence from the World Health Organization suggests that nearly half of the world's population are affected by mental illness with an impact on their self-esteem, relationships and ability to function in everyday life. An individual's emotional health can also impact physical health and poor mental health can lead to problems such as substance abuse.

Maintaining good mental health is crucial to living a long and healthy life. Good mental health can enhance one's life, while poor mental health can prevent someone from living an enriching life. According to Richards, Campania, & Muse-Burke (2010) "There is growing evidence that is showing emotional abilities are associated with prosocialbehaviors such as stress management and physical health" (2010). It was also concluded in their research that people who lack emotional expression are inclined to anti-social behaviors. These behaviours are a direct reflection of their mental health. Self-destructive acts may take place to suppress emotions. Some of these acts include drug and alcohol abuse, physical fights or vandalism.

Illness in expression of emotional needs

The fact that secondary gains can sometimes make illness attractive suggests that the expression of physical distress sometimes fulfill certain psychological needs. Particular aspects of ones cultural background, upbringing, daily life circumstances, and personality can make illness a natural outlet for the expression of emotional distress. Ideally a person would find the direct expression of his or her emotions perfectly acceptable. A person who is in touch with his or her own emotional life might readily admit to feeling angry, anxious or depressed with no smokescreen and no conscious and unconscious need to disguise those feelings. For another, however, it may be safer to complain about the purely physical manifestations of distress. Instead of stating, “I feel very anxious,” the individual, describes a pounding heart, lightheadedness, and difficulty breathing. Instead of expressing feelings of depression, he or she describes fatigue, lack of energy, and problems of sleeping. Some people might actually be unable to express or describe in words the emotions they feel and cannot even identify those emotions. Instead, they may describe only their physical symptoms. Psychiatrists refer to this condition as alexithymia (Sifneos, 1996).

People with a generalized anxiety disorder (unrealistic or excessive anxiety) often experience a variety of physical symptoms. These can include feeling of shakiness, muscle tension, dizziness, nausea, irritability and insomnia. Anxious feeling that involve panic can result in shortness of breath, heart palpitations, and chest pain as they trigger the biological suffocation alarm system (Klein,1993). These later symptoms can lead physician and patient to significant concern about the possibility of a dangerous cardiac condition. Illness is not a purely physical or purely emotional phenomenon. A person who feels anxious typically does have tense muscles, a rapid heartbeat, and cold clammy hands. A person who is emotionally depressed, perhaps in reaction to the death of a loved one or loss of a relationship, is slowed down and feels fatigued. What matters in determining whether the individual will adopt a psychological or somatic interpretation is where the individual focuses attention; the interpretation of what is being felt, and how distress is explained.

Most people exhibit something between the extremes of the purely physical and the purelypsychological expression of distress. They may have e a sense of emotional distress, but are unable to find the right words to describe their psychological state. They may have been taught to repress and psychological interpretations of their experience and to hide their feelings from others (as in "boys don't cry"). If the very things that they need, such as attention, emotional support, or practical help, become available when they complain of physical illness, the scales will likely be tipped toward physical rather than psychological interpretations of experience.

Usually, the decision to express physical instead of emotional distress is not made consciously. When a depressed patient comes to the physician complaining of fatigue, he or she is likely to be unaware of the emotional explanation of fatigue. Instead, a long period of time may elapse before the true source of problem is found. If the patient is particularly good at hiding (bothfrom self and others) evidence of psychological distress, the physician may continue to search at length, and sometimes in vain, for the physical abnormality that explains the patient's subjective feelings of illness. Sometimes in the process of such patients receive unnecessary medication, treatments and surgeries. For example, in one study, women in a hospital neurological service whom had expressed their distress in physical terms were more likely to have received a hysterectomy at some point in their lives than women in a psychiatric service, who had expressed their distress in primarily psychological terms(52% vs 21%) (Bart, 1968).

Research suggests that expressing distress with somatic (bodily) vocabulary is not at all uncommon. In a substantial proportion of people who seek medical treatment for somatic complaints, no organic problem can be found no matter how much testing is done (Barsky&Borus, 1995). Most studies estimate that in the care of between 10 and 30 percent of patients , no organic basis for illness can be found (Kellner, 1986). In these cases, patients also more likely to be experiencing psychological problems, including anxiety and depression (Katon& Walker, 1998; Kisely et al.,1997). This does not mean that their symptoms are not real, but it does not suggest that anxiety or depression may be interacting with their physical symptoms, exacerbating them or being strengthened by them.

There are limitations in medicine that make it impossible to find the organic basis for some illness that truly do have an organic origin. The inability to find an explanation for their physicaldistress lead a patient to become anxious or depressed. Traditional medicine does not have a diagnosis for every ailment. Some syndrome such as "chronic fatigue syndrome" are in the process of being identified, their signs and symptoms mapped out, and their etiology, incidence and prognosis identified empirically. Other ailments are not so well described, such as chest muscle tightness and spasm due to emotional tension. In fact, there are so many conditions that patients report that have no apparent cause that the medical term idiopathic , which means " arising spontaneously or from an obscure or unknown cause", is used quite commonly.

Module 2

STRESS

Stress is normal parts of life that can help us either learn and grow or can cause us significant problems. Stress is a part of our everyday life. The word stress is used very commonly and many people use this term without knowing really what it means. In our daily lives, we are exposed to situations that produce stress like relationship issues, work overload, family issues, health related problems etc. Due to individual differences each one interprets and reacts to events that make stress differently. Stress is simply a fact of nature forces from the inside or outside world affecting the individual. The individual responds to stress in ways that affect the individual as well as their environment. Because of the excess of stress in our modern lives, we usually think of stress as a negative experience, but from a biological point of view, stress can be a neutral, negative, or positive experience. Any event or circumstance that strains or exceeds an individual ability to cope is called stress (Lahey, 2004).

Stressors

While stress is the feeling we have when we are under pressure, stressors are the things in our environment that we are responding to. Stressors can be as simple as background noise in our environment or as complex as a social situation such as going out on a date. Stressors can involve aphysical threat such as a car speeding toward you or an emotional threat such as being rejected by your boyfriend or girlfriend.

Relationship between Stressors and Stress

The relationship between stressors and our experience of stress is not one to one. On average, the more stressors we experience in our life, the more stressed we will feel. What isstressful for one person may not necessarily be stressful for another. Our experience of stress isgreatly influenced by how we interpret and label our experience. In order to feel stressed, a person must interpret the environment as some sort of threat or as requiring some change or adaptation on my part. If a person wakes up on a crisp winter morning to a fresh snowfall, his reaction will be determined by how that person interprets this event. The individual may enjoy the beauty and relax while another may sit and have his breakfast, enjoying the view out of window. Alternatively, one may be concerned about driving on slippery roads and be very tense and worried and the physiological stress response will kick in while trying to eat my breakfast. Another part of the equation is how each judges their ability to cope with the stressor.If the person have had a considerable amount of experience driving on slippery roads and have a four-wheel drive car with studded snow tires, he may have confidence in his ability to cope with the stressor and thus will experience less stress.

Warning Signs of Stress

When a person is are exposed to long periods of stress, their body gives warning signals that something is wrong. These physical, cognitive, emotional and behavioral warning signs should not be ignored. They tell us that we need to slow down. If we continue to be stressed and if we don't give our body a break, we are likely to develop health problems like heart disease. We could also worsen an existing illness.

Below are some common warning signs and symptoms of stress.

Physical Signs

This include dizziness, general pains or aches, headaches, grinding teeth, clenched jaws, indigestion, muscle tension, difficulty in sleeping, increased heart rate, sweaty palms, tiredness, weight gain and loss and upset stomach.

Mental Signs

Mental signs of stress include constant worry, difficulty in making decisions, forgetfulness, inability to concentrate, lack of creativity, loss of sense of humor and poor memory.

Emotional Signs

Some of the examples of emotional signs of stress include anger, anxiety, crying, depression, feeling powerless, frequent mood swings, irritability, loneliness, negative thinking,nervousness and sadness.

Behavioral Signs

This include compulsive eating, critical attitude to others, explosive actions, frequent job changes, impulsive actions, increased use of alcohol or drugs, withdrawal from relationships or social situations and bossy behavior.

Causes of Stress

The situations and pressure that cause stress are known as stressors. We usually think of stressors as being negative, such as an exhausting work schedule or a rocky relationship. Anything that puts high demands on us or forces us to adjust can be stressful. This includes positive events such as getting married, buying a house, going to college, or receiving a promotion. Not all stress is caused by external factors. Stress can also be self-generated, for example, when we worry excessively about something that may or may not happen, or have irrational, pessimistic thoughts about life. What causes stress depends, at least in part, on our perception of it. Something that's stressful to us may not faze someone else; they may even enjoy it. For example, exam may be stressful for some but few may enjoy facing the challenge given by exams. For some individuals journey may be tiring and irritating others may find the trip relaxing because they allow more than enough time and enjoy listening to music while they drive.

Common external causes of stress

Common external causes of stress include major life changes, relationship difficulties, work and school, financial problems, being too busy and children and family.

Common internal causes of stress

Common internal causes of stress include chronic worry, pessimism, negative self-talk, unrealistic expectations, perfectionism, rigid thinking and lack of flexibility. Stress has a number of sources, which can be classified according to the magnitude of the event: Cataclysmic events, life events and daily hassles. Cataclysmic events include natural disasters such as floods and earthquakes and intentional violence such as terrorist attacks. Life events are events that produce changes in peoples lives that require adaptation. Life events may be either negative or positive. Negative life events such as divorce, death of family members, or crime victimization can produce severe and long lasting stress.

Daily hassles are every day events that create repetitive, chronic distress. Some hassles arise from the physical environment; others from the psychosocial environment. Stress from pollution, noise, crowding and violence combine in urban settings with commuting hassles to create a situation described as urban press. Each of these sources of stress may also be considered individually. The combination of community stressors such as crowding, noise andthreat of violence is common in poor neighborhoods, creating an environment of poverty.

Daily hassles in the psychosocial environment occur within the situations of the everyday social environment, including community, work place and family. Within the community. Racism and sexism produce stress for the targets of these types of discrimination. Within thework place, job with high demands and little control create stress, and poor support adds to the stress. Within the family, relationship such as spouse and parent present possibilities for conflict and stress. In addition, the conflict between family and work demands is a source of stress for many people.

COPING

Coping can be defined as the actual effort that is made in the attempt to render a perceived stressor more tolerable and to minimize the distress induced by the situation Folkman& Lazarus, (1985). According to Folkman and Lazarus there are two types of coping strategies. They include problem focused and emotion focused coping. Problem focused coping is often used when something constructive can be done to help solve the problem, at least make the situation better (Folkman& Lazarus, 1980). Emotion focused coping is aimed at reducing or managing theemotional distress that is associated with the situations. Details of categories are discussed below.

1) PROBLEM FOCUSED COPING -Problem-focused coping aims at problem solving or doing something to alter the source of stress. Problem-focused coping tends to predominate when people feel that something constructive can be done. According to Folkman& Lazarus,

(1980) problem focused coping involves active coping, social supports for instrumental reason, restraint coping, acceptance, planning, suppression of competing activities and positive reinterpretation and growth.

There are seven categories under problem focused coping and they are given below.

a) Active coping- Active coping is the process of taking active steps to remove the stressor. This involves taking additional or direct action to get rid of a problem and concentrating on the task at hand. In the case of adolescents' active coping would be removing the stressor by dropping a class.
b) Social supports for instrumental reason- Social supports for instrumental reason is seeking advice, assistance or information. This is a problem focused coping. Here the person talks to one's advisor about how to deal with the issues. Individuals who are high on using social supports for instrumental reason use above mentioned methods when faced with crisis.
c) Restraint coping- This means waiting until an appropriate opportunity comes, holding oneself back and not acting prematurely. Individuals who use this method hold on doing things till the right time approach and they do not engage in activities without giving a second thought. This is an active coping strategy in the sense that the persons behavior focuses on dealing effectively with the stressor.
d) Acceptance- Acceptance is a functional coping response, in that a person who accepts the reality of a stressful situation would seem to be a person who is engaged in the attempt to deal with the situation. Here the person accepts the fact that something has happened and tries to get adjusted with the present situations.
e) Planning- This involves coming up with active strategies, thinking about what steps to take and how best to handle the problem. Individuals high on using planning strategies make use of above mentioned strategies when faced with problems.
f) Suppression of competing activities- This means putting other projects aside, trying to avoid becoming distracted by other events, even letting other things side, if necessary in order to deal with the stressor. Here the person may suppress involvement in competing activities or may suppress the processing of competing channels of information in order to concentrate more fully on the challenge or threat at hand.
g) Positive Reinterpretation and Growth – This involves seeing things in a positive manner and learning from experiences.

2) EMOTION FOCUSED COPING – Emotion focused coping tend to predominate when peoplefeel that the stressor is something that must be endured (Folkman& Lazarus, 1980). This includes social supports for emotional reasons, denial or avoidance, venting of emotio ns, turning to religion, mental disengagement, behavioral disengagement and alcohol disengagement. Seven categories are identified under emotion focused coping and they are discussed below.

a) Social supports for emotional reasons -Seeking social support for emotional reasons is getting moral support, sympathy or understanding. This involves venting about the problem to others. This is an aspect of emotion focused coping.
b) Denial or avoidance – Denial here means refusal to believe that the stressor exists or of trying to act as though the stressor is not real. This involves simply not thinking about the problem.
c) Venting of emotions- Here the individual has the tendency to focus on whatever distress or upset one is experiencing and to ventilate those feelings. This is a means of emotion focused coping.
d) Turning to religion- One might turn to religion when under stress for widely varying reasons: religion might serve as a source of emotional support, as a vehicle for positive reinterpretation and growth, or as a tactic of active coping with a stressor. Here individuals seek support of religion when they face with stressors in life.
e) Mental disengagement- One of the dysfunctional coping which comes under emotion focused coping is mental disengagement. This includes using alternative activities to take one's mind off a problem a tendency opposite to suppression of competing activities), day dreaming, escaping through sleep or escape by immersion in T.V etc.
f) Behavioral disengagement- Second dysfunctional coping means in many circumstances is behavioral disengagement. This comes under emotion focused coping. In behaviouraldisengagement one reduces one's effort to deal with the stressor even giving up the attempt to attain goals with in which the stressor is interfering.
g) Alcohol disengagement – Here one reduces their effort to deal with a stressor by using alcohol as a means to forget their stress element. Individuals who use alcohol and drugs are high on using this strategy.

STRESS MANAGEMENT TECHNIQUES

1. Meditation

A few minutes of practice per day can help ease anxiety. "Research suggests that daily meditation may alter the brain's neural pathways, making you more resilient to stress," says psychologist Robbie Maller Hartman, PhD, a Chicago health and wellness coach.

The procedure for a short mediation is given below. Sit up straight with both feet on the floor. Close your eyes. Focus attention on reciting out loud or silently a positive mantra such as "I feel at peace" or "I love myself." Place one hand on belly to synch the mantra with breaths. Let any distracting thoughts float by like clouds.

2. Breathe Deeply

Second stress management technique is breathing exercise. For breathing exercise we need to take 5-minute break from whatever is bothering us and should focus instead on our breathing. This exercise starts with sitting up straight by closing eyes with a hand on belly. Slowly inhaling through nose, feeling the breath, starting from abdomen, and feeling it to the top of our head.

Reverse the process as you exhale through your mouth. "Deep breathing counters the effects of stress by slowing the heart rate and lowering blood pressure," says psychologist Judith Tutin, PhD, a certified life coach in Rome,

3. Be Present

Usually people rush through dinner, hurry to our next appointment, and race to finish one more thing on our agenda. An important things to reduce our pulse is to slow down. "Take 5 minutes and focus on only one behavior with awareness," says Tutin. Notice how the air feels on our face when we are walking and how our feet feel hitting the ground. Enjoy the texture and taste of each bite of food as we slowly chew. When we spend time in the moment and focus on our senses, we should feel the tension leave our body.

4. Reach Out

A good social support system is one of the most important resources for dealing with stress.Talking to others preferably face-to-face or at least on the phone is a great way to better manage whatever is stressing you out.

5. Tune In to Your Body

Mentally scan our body to get a sense of how stress affects it each day. Lie on your back or sit with your feet on the floor. Start at your toes and work your way up to your scalp, noticing how your body feels. "Simply be aware of places that we feel tight or loose without trying to change anything," says Tutin. For 1 to 2 minutes, imagine each deep breath flowing to that body part. Repeat this process as we move focus up to body, paying close attention to sensations you feel in each body part.

Module 3

HEALTH BEHAVIOR CHANGE MODELS

Armitage and Conner (2000) in a review on social cognition models of health behavior describe three categories of models: motivational, behavioral enactment and multi-stage. *Motivational models* are based on the assumption that drive is enough for successful behavioral enactment and therefore focus on the motivational factors that determine performance. As intention is considered to be the most proximal determinant of behavior, it is widely used as the dependent variable in research founded on motivational models (Godin & Kook, 1996). The *behavioral enactment models* have developed as a response to the criticisms brought to motivational models. The critics of motivational models described the existence of a gap between the formation of intentions and the actual actions (Sniehotta, Scholz, &Schwarzer, 2005). Consequently, behavioral enactment models center on the action control strategies that help translate motivation into action. Last but not least, *multi-stage theories* are considered the most complex ones because they include variables that facilitate the adoption of behavior as well as variables that guarantee its maintenance (Armitage& Conner, 2000).

1. Motivational Models

The motivational models have been created to predict health behavior at particular points in time. They were also elaborated in order to discover the variables that determine health behavior and assess their ability to predict it (Armitage& Conner, 2000). In the following paragraphs we are going to briefly describe and review the efficacy of the following models: the health belief model, protection motivation theory, social cognitive theory, the theory of reasoned action and the theory of planned behavior.

The Health Belief Model

The Health Belief Model (HBM; Rosenstock, 1974) assumes that the likelihood of a person engaging in a specific health behavior is a function of several beliefs: the extent to which she/he believes that she/he is *susceptible* to a particular illness; her/his perception of the *severity* of the illness consequences; perceived *barriers/costs* of adopting a health behavior; perceived *benefits* of adopting the targeted health behavior. These cognitive factors determine beliefs in personal *health threat* and in the *effectiveness of a health behavior*. Also, the model suggests that certain *cues to action* can trigger health behavior when the suitable health beliefs are held. A number of factors can serve as action triggers: internal cues (i.e., having an accident oneself, feeling pain etc) or external cues (i.e., reading a mass-media article about the effects of an unhealthy diet, a close friend discovering she has cancer etc). In this model behavioral intention is considered a mediating factor between the above described components and action.

One problem with the HBM is that it does not specify how the different beliefs influence one another or how the explanatory factors are combined to influence behavior. This resulted in different studies using numerous combinations of variables or different ways of analyzing variables: multiplying vulnerability and severity (Conner & Norman, 1994) or subtracting barriers from benefits (Wyper, 1990). Another problem is that the authors offered no operational definition of the variables and this led researchers to use a diverse methodology in their studies.

Despite these theoretical problems, the HBM has received empirical support for predicting a wide range of health behaviors: mammography and cervical screening (Breners& Skinner, 1999; Fishera& Frank, 1994; Orbell, Crombie, & Johnston, 1996), breast self-examination (Champion, 1990; Friedman, Nelson, Webb et al., 1994; Millar, 1997), adherence to medication (Budd, Hughes, & Smith, 1996; Hughes, Hill, & Budd, 1997; Nageotte, Sullivan, Duan, & Camp, 1997), exercise behavior (Corwyn& Benda, 1999) and safe-sex behaviors (Bakker, Buunk, Siero, & Van den Eijden, 1997).

The results of a meta-analysis conducted by Sheeran and Abraham (1996) concluded that the HBM constructs are frequently significant predictors of behavior but their effects are small.

Protection Motivation Theory

Protection Motivation Theory (PMT; Rogers, 1975) developed starting from the scientific literature that argued for the effectiveness of fear-arousing communication. The level of induced fear influences the adoption of adaptive responses in a linear way. It has been shown that a medium level of fear brings forth cognitive responses that lead to behavioral implementation.

Protection motivation is the result of both threat appraisal and coping appraisal. The evaluation of the health threat and the appraisal of the coping responses result in the intention to perform adaptive responses (protection motivation) or maladaptive responses that place individuals at health risks. Perceived vulnerability to the disease and perceived severity of the illness are expected to inhibit the probability of maladaptive responses. Fear arousal indirectly enhances the protection motivation by increasing perceived severity and perceived vulnerability to the disease. The coping appraisal process evaluates the components that are related to the appraisal of the coping responses: the individual's expectation that carrying out recommendations will determine threat removal (response efficacy) and the belief in one's ability to perform the necessary actions successfully (self-efficacy). Protection motivation is the result of perceived severity and perceived vulnerability, as well as response efficacy and self-efficacy. It is a mediating variable that arouses, maintains and guides protective health behavior. It facilitates the implementation of adaptive behaviors and can be best measured by behavioral intentions.

PMT has been used as a framework for predicting various behaviors: reducing alcohol use (Stainback& Rogers, 1983), enhancing healthy lifestyles (Stanley & Maddux,

1986), exercise, enhancing diagnostic health behaviors and prevention of sexually transmitted diseases (Van der Velde& Van der Pligt, 1991).

In order to evaluate PMT as a predictive social cognition model, several criteria have been used. One refers to the variance of preventive behavior that can be explained by using the PMT components as predictors. Various studies have shown that PMT can be used successfully for the prediction of intentions to adopt preventive health behavior (Boer &Seydel, 1996). However, further research revealed that threat appraisal plays a role in the implementation of protective health behaviors only in the cases where the person is faced with a new threat.

The Theory of Reasoned Action

Another model which stresses the role of cognitive factors in motivating actions for behavior change is the Theory of Reasoned Action (TRA; Fisbein&Ajzen, 1975). TRA states that the most proximal cause of behavior is one's intention to adopt the targeted action. Intentions represent a person's motivation that takes the form of a conscious plan to exercise a certain amount of effort and perform the desired behavior. Thus, the more a person wants to adopt a behavior, the more it is likely to do so. Intentions are influenced by attitudes towards performing a particular behavior and social norms. *Attitudes* are a function of a person's belief about the consequences of actions, namely: the perceived likelihood that adopting certain behavior will lead to a particular outcome and the evaluation of that outcome. If the behavioral outcomes are perceived as desirable, a person is more likely to have a positive attitude towards that particular behavior. For instance, if adopting a low fat diet is perceived as leading to weight loss and weight loss is valued as being helpful, the person will develop a positive attitude towards adopting a low fat diet.

Subjective norms represent a person's belief that significant others (people whose opinion is valued as important) think that he/she should adopt a certain behavior. Subjective norms are determined by normative beliefs and people's motivation to comply with the opinions of significant others. There is a distinction between *injunctive social norms* that reflect the concern with others' social approval and *descriptive norms* that describe what others actually do. However, there are researchers that consider both norms to be indicators of the same underlying concept, social pressure (Conner & Sparks, 1996).

The Theory of Planned Behavior

The Theory of Planned Behavior (TPB; Ajzen&Fishbein, 1980; Ajzen, 1991) was developed in an attempt to broaden the applicability of the TRA by including perceived behavioral control as an additional predictor of behavior. The basic assumption of TPB is the fact that beliefs are the fundamental determinants of any behavior and therefore, risk behavior can be changed by modifying the underlying beliefs. According to the TPB, attitudes, social norms and perceived behavioral control influence intention that represents the proximal determinant of behavior. *Perceived behavioral control* is the individual's perception regarding the extent to which performing a certain behavior is easy or difficult.

The concept is similar to the one of self-efficacy (Bandura, 1986). The relationship between perceived behavioral control and behavior suggests that we are more likely to engage in behaviors over which we have control. Perceived behavioral control is influenced by both internal factors (i.e., skills, information, abilities, emotions, personal deficiencies) and external factors (i.e., opportunities, dependence on others, barriers). Thus, perceived behavioral control is determined by perceived presence or absence of resources and opportunities and the perceived ability of these to induce or hinder performance.

The TPB has been widely used because it offers a clear theoretical account of the links between attitudes, intentions and behavior. Also, it states how these constructs should be operationalized, which makes the design of behavior change interventions easier. Fishbein and Ajzen (1975) provide a frame for understanding the ways in which models like the TPB can be used to change behavior. Successful behavior change can be achieved when intentions are changed thorough either attitudes, subjective norms or perceived behavioral control. Fishbein and Ajzen (1975) also present two strategies for changing beliefs: introducing new salient beliefs or changing existing prominent beliefs of the target population.

Both the Theory of Reasoned Action and the Theory of Planned Behavior have been used to predict several health behaviors: smoking, drinking, dental behavior, health screening (Conner & Sparks, 1996) and AIDS preventive behavior (Terry, Gallois, &McCamish, 1993). However, Godin and Kok (1996) conducted a review that showed components of the TPB to explain on average 41 percent of the variance in intention, but only 31 percent of the variance in behavior.

Social Cognitive Theory

Social cognitive theory (SCT; Bandura, 1986) states that behaviors are performed if people believe that they have control over the outcome, perceive few external barriers towards reaching their goals and have confidence in their ability to achieve these. *Self-efficacy* and *outcome expectancies* (related to the situation and to action) represent the two central concepts of SCT.

Self-efficacy refers to a personal sense of control that facilitates behavior change. If people believe that they can take action to solve a problem instrumentally, there is a higher probability that they will actually do so and they feel more committed to the decision. Self-efficacy influences people's feelings, thought and actions. A low self-efficacy has been linked to depression, anxiety and helplessness. Also, persons with low self-efficacy are characterized by pessimistic thoughts and low motivation to act. In contrast, individuals with a strong sense of self-efficacy tend to accept challenges, set themselves higher goals and stick to them. Moreover, once they have taken a particular action these people tend to invest more effort, persist longer and recover when encountering setbacks.

It has been shown that a strong sense of personal efficacy is related to better health, higher achievement and social integration. Therefore, self-efficacy has become a key variable in clinical, educational, social, developmental health and personality psychology.

Outcome expectancies differ in the sense that they refer to the perception of possible consequences of one's actions. Situation-outcome expectancies refer to the fact that certain behavioral consequences are determined by the environmental factors and are not subject to personal control. Action-outcome expectancies represent the belief that actions lead to a certain results.

SCT has been used in several studies to predict a variety of intentions and health behaviors. However, SCT has been shown to account for only a small to medium amount of variance in behavior (Armitage& Conner, 2000). The main predictor of behavior is considered to be the self-efficacy component of SCT. Several studies have shown the potential of self-efficacy to influence initiating and maintaining behavior change: preventing unprotected sexual behavior, physical exercise, nutrition and weight control, resistance self-efficacy for addictive behaviors and recovery-self-efficacy related to addictive behaviors (Schwarzer& Fuchs, 1996). Moreover, the central role played by self-efficacy in several other health behavior models (i.e., PMT, TPB, HAPA), has led health psychologists to state that self-efficacy is more important in itself than SCT (Armitage& Conner, 2000).

Social cognitive theory incorporates the basic parts of social learning theory but adds the principles of observational learning and vicarious reinforcement (watching and learning from the actions of others). (36) According to social cognitive theory, three main factors affect the likelihood that a person will change a health behaviour: self-efficacy, goals and outcome expectancies. If individuals have a sense of self-efficacy, they can change behaviour even when faced with obstacles. If they feel unable to exercise control over their health behaviour, they remain unmotivated and unable to persist through challenges. (23) As an individual adopts new behaviour, this causes changes in both the environment and the individual. (21) Table 6 presents the main concepts of social cognitive theory and possible change strategies for each.(37) According to this theory, self-efficacy is considered the most important personal factor in behaviour change and an important construct in other health behaviour theories as well. (21) Strategies for increasing self-efficacy include: setting incremental goals (e.g. exercising for 10 minutes each day); behavioural contracting (a formal contract, with specified goals and rewards); and monitoring and reinforcement (feedback from self-monitoring or record keeping).

Example of Social cognitive theory

Children and their caregivers are prime candidates for intervention to curb the rising incidence of skin cancer. Preschools provide a unique opportunity to influence the sun protection practices of parents and teachers on behalf of young children. Sun Protection is Fun!, a comprehensive skin cancer prevention program … was introduced to preschools in the greater Houston area. The program's intervention methods are grounded in Social Cognitive Theory and emphasize symbolic modeling, vicarious learning, enactive mastery experiences, and persuasion. Program components include a curriculum and teacher's guide,

videos, newsletters, handbooks, staff development, group meetings designed to encourage school-wide changes to support the program, and sunscreen

2. Behavioral Enactment Models

Motivational models of health behavior are based on the assumption that there is an almost perfect association between intention and behavior. However, meta-analyses have shown that motivational models explain a large proportion of the variance in intention but not of behavioral variance (Conner &Armitage, 1988). In the next paragraphs we are going to describe and discuss the effectiveness of the main behavioral enactment models that developed in order to explain the gap between intentions and behavior.

Implementation Intentions

Studies have shown that intentions are not perfect predictors of action, as they explain only 20 or 30 % of behavior variance. The question arises "what happens to the ones that have good intentions but fail to turn them into action?" In order to provide an answer, Orbell and Sheeran (1998), suggest there are strategies that help translate intentions into action. One of these strategies is represented by the concept of implementation intentions (Gollwitzer, 1999). According to Gollwitzer (1990; 1993) and Heckhausen (1991), following the motivational phase that ends with the formation of a goal intention, there is a volitional phase during which plans are made to ensure behavioral enactment. These plans have been called implementation intentions and they take on the specific form of "*I intend to do X at time and place Y*". Empirical evidence has been provided that the formation of implementation intentions increases the likelihood that a goal will be achieved (Gollwitzer&Brandstätter, 1997). This success is explained by the fact that specifying the particular time and place for performing the intention helps in overcoming difficulties with getting started. The mental link between the targeted behavior and the context of apparition is traced form memory and makes good performance opportunities less likely to be missed.

Previous meta-analyses (Sheeran, 2002) have shown implementation intentions to have a "medium" effect size on behavior (r+=0.33). Also, their effectiveness in promoting behavior has been proven for various behaviors: attendance to cervical cancer screening (Sheeran&Orbell, 2000), vitamin supplement use (Sheeran&Orbell, 1999), exercise behavior (Milne, Orbell, &Sheeran, 2002), condom use (Sheeran Abraham, &Orbell, 1999).

Two kinds of planning are distinguished in the scientific literature: action planning and coping planning. Action planning is identified with implementation intentions (Gollwitzer, 1999) while coping planning refers to anticipating personalized risk situations and the planning of adequate coping responses (Sniehotta, Scholz, Schwarzer, Fuhramn, Kiwus, &Voller, 2005). Interventions including action planning have been successfully applied to: maintaining a healthy diet (Verplanken&Faes, 1999), regulating alcohol consumption (Murgraff, White, & Phillips, 1996), physical exercise (Lippke, Ziegelmann,

&Schwarzer, 2004). For long-term behavioral changes, action coping has been shown to be more efficient in inducing behavior enactment. Action plans proved to be more useful early in the behavior change process, while coping plans were more helpful later on for behavior maintenance. Consequently, both kinds of planning are effective for designing interventions at different stages of behavior change (Sniehotta, Schwarzer, Scholz, &Schuz, 2005).

Goal Theory

The theory of goal pursuit, developed by Bagozzi (1992, 1993) builds on the motivational models by examining the motivational influences on goal intentions and trying. Attitudes (toward process, success and failure), subjective norms and goal efficacy determine a desire which influences the formation of a goal intention. "Trying" is determined by goal intentions and refers to processes that initiate and regulate the instrumental acts that lead to goal attainment. After the goal intention has been formed, three appraisals decide the means of reaching the proposed goal: self-confidence, the likelihood of goal attainment and the perception of pleasantness/unpleasantness. The initiation of goal pursuit is determined by the "trying" variable. Bagozzi (1992) considers trying to be a function of three processes: decisions regarding the means of action, planning and control of goal-directed behavior and maintenance of commitment. In addition, planning and control of goal-directed behavior are a function of implementation intentions (Gollwitzer, 1993) and goal commitment reflects the dispositional and purposive mental activities that are necessary in order to maintain or disengage from goal commitment.

Bagozzi's model has not been widely applied to the field of health psychology; however there are a few comparison studies that show larger proportions of variance in behavior to be accounted for by variables from goal theory as compared to the ones of TRA or TPB. Further empirical investigations are needed in order to explore the applicability and utility of this theory in the field of health psychology.

3. Multi-Stage Models

One of the assumptions in health psychology is that behavioral change is the outcome of a conscious decision making process, where benefits and costs of adopting a particular behavior are carefully considered before acting. Several models like: the Theory of Reasoned Action (Ajzen&Fisbein 1980; Fisbein&Ajzen 1975), the Theory of Planned Behavior (Ajzen, 1988; 1991), the Health Belief Model (Rosenstock, 1974) and the Protection Motivation Theory (Rogers, 1975) were developed starting from this idea. Another common characteristic is that each of the above mentioned theories has a single prediction equation that describes the probability that a certain individual will act. Because their prediction rules place each individual along a continuum of action likelihood, these theories have been called "*continuum theories*". Designing an intervention based on one of these theories would mean that one should aim to move people along the action continuum and increase their likelihood of adopting the targeted behavior.

However, this continuum perspective has been criticized by people who state that behavior change requires progression through several stages, with different variables determining behavior at each particular phase. These are called *stage theories* and are based on the assumption that one has to identify the determinant variables and their combination, characteristic for each stage transition. Health behavior is complex and a single prediction equation is not enough to design effective behavior change interventions. Moreover, there are certain barriers that people face when trying to change their behavior and these are different at various stages. This has important implications for the way in which interventions are planned. Contrary to continuum theories, stage theories aim to match interventions to people by identifying the stage they have reached in changing behavior and helping them overcome the specific barriers that hinder transition to the next stages (Briedle, Riemsma, Pattenden, Sowden et. al, 2005).

Weinstein (1988) described four important characteristics of stage theories. First, they possess a category system that defines the stages. A stage is a theoretical construct that includes certain elements. Second, there is an exact ordering of the stages, based on the assumption that individuals must pass through all stages in order to reach the point of action and behavior maintenance. However, people can reverse to a previous stage or can remain "stuck" at a certain stage. A third characteristic is that these theories describe a common set of obstacles that have to be overcome at particular stages. Fourth, different barriers are being faced by individuals at different stages.

The main stage models in health psychology are: the *Transtheoretical Model of Change* (TTM, Prochaska&DiClemente, 1983), the *Precaution Adoption Process Model* (PAPM, Weinstein, 1988) and *Health Action Process Approach* (HAPA, Schwarzer, 1992).

The Transtheoretical Model of Change

The Transtheoretical Model (TTM) or Stages-of Change Model (Prochaska &DiClemente, 1983) includes five stages: (1) *precontemplation* where there is no intention to change behavior, (2) *contemplation* where the individual is beginning to consider change at some nonspecific time in the next months; (3) *preparation* where the person is planning to change in the immediate future; (4) *action* where the individual engages in behavior change and (5) *maintenance* where a constant state of behavior change is reached. *Relapse prevention* describes the fact that most people find themselves "recycling" through the stages of change several times before the change becomes truly established. In this stage, the individual is taught to reframe "the failure" into a "new lesson" and to re-engage in the change process (Zimmerman, Olsen, & Bosworth, 2000).

According to TTM, there are also nine processes of change that affect the transition between stages: consciousness raising, social liberation, emotional arousal, self-reevaluation, commitment, countering, environment conferral, rewards and helping relations. The model

also includes a series of outcome variables: decisional balance, self-efficacy, behaviors and any other psychosocial or biological variables that describe the targeted area of change.

One of the advantages of the TTM is that it has general implications for several areas of intervention development and implementation. The TTM is an appropriate model for the *recruitment* of a target population because it makes an assumption about the readiness for change of various individuals. Consequently, a person should be included in an intervention group based on their belonging to one of the TTM stages.

According to the TTM, individuals find themselves in different stages and interventions have to be adapted to meet their specific needs. Moreover, traditional interventions often have high dropout rates because the program does not match their particular needs. As the TTM based interventions are designed to accommodate the requirements of a certain group, this guarantees a smaller drop out rate.

Another advantage of the TTM is that it can provide sensitive *measures of progress*. Contrary to continuum models that usually use a single measure of outcome, the TTM includes a set of outcome measures and therefore reinforces the steps that an individual takes toward behavioral change. Also, the TTM can ease the analysis of mediation mechanisms. Because of its stage like structure, the model facilitates a process analysis of transition patterns from one stage to another and decides which interventions are effective for which stage (Briedle, Riemsma, Pattenden, Sowden and al, 2005).

The TTM has been successfully applied to several health behavior change interventions: smoking cessation (DiClemente, Prochaska, Fairhurst et al., 1991), exercise (Prochaska& Marcus, 1994), addictive behaviors (Prochaska, DiClemente, & Norcross, 1992) and dietary change (Povey, Conner, Sparks, James, & Shepard, 1999). However, the majority of these studies have used cross-sectional designs which make the true evaluation of the TTM difficult (Armitage& Conner, 2000). Meta-analyses on TTM effectiveness recommend research on the mediators and moderators of stage transition (Marshall & Biddle, 2001).

The Precaution Adoption Process Model (PAPM)

The PAPM (Weinstein, 1988; Weinstein & Sandman, 2004) includes seven stages among a path from lack of knowledge to the initiation of behavior and maintenance. Initially people do not know anything about the issue (stage 1). After they receive information on the issue they may be aware but still unengaged (stage 2). When they eventually become engaged by the matter they reach a decision-making stage (stage 3). The decision-making process may have two outcomes: if the person decides not to act at the moment (stage 4) or decide to act (stage 5). Stage six represents the initiation of action, while stage seven the maintenance phase. The model assumes that people usually pass through all the stages, but there is no indication of the time spent in each one of them. Movement back and forth among the stages is possible, although, once the person has information; it will not go back to the stages of unawareness for instance (Weinstein, Rothman, & Sutton, 1998).

The PAPM model differs from the other stage theories like the Transtheoretical Model (TTM) because it distinguishes among people who are unaware of the issue and those who know something but are not yet interested (stage 1 and 2). Moreover, the assignment to stages is made based on the person's current thoughts about the behavior, without considering a time frame like the TTM does.

The PAPM model has been applied to several behaviors: osteoporosis prevention (Blalock, DeVellis, Giorgino et al, 1996), mammography (Clemow, Costanza, Haddad *et al.*, 2000), hepatitis B vaccination (Hammer, 1997) and home radon testing (Weinstein & Sandman, 2004).

Health Action Process Approach

The Health Action Process Approach model (HAPA; Schwarzer, 1992) is considered to connect the motivational, behavioral enactment models and multi-stage models presented above (Armitage& Connor, 2000). The basic assumption of the HAPA model is that the initiation and maintenance of health behavior must be considered as a process consisting of at least two stages: a motivational phase and a volition phase. The latter is further subdivided into a planning phase and a maintenance phase.

In the motivational phase, an individual forms an intention either to adopt an adaptive behavior or to change risk behaviors. Self-efficacy and outcome expectancies are the major predictors of intention at this stage. Outcome expectancies are considered precursors of self-efficacy because people make suppositions about the possible consequences of behaviors before thinking whether they can actually perform the targeted behavior themselves. Self-efficacy is regarded as a mediator between outcome expectancies and intentions. Another indirect factor that has an important influence within the motivational phase is the perception of risk. These help to stimulate outcome expectancies which further encourage self-efficacy. A minimum level of threat must be perceived before people begin to think about the benefits of performing certain behaviors and their competence of performing them.

The action phase describes the processes that take place after an intention to perform a certain health behavior has been formed. The volitional processes are mainly influenced by self-efficacy, as the number and quality of action plans depend on one's perceived competence and experience. When an action is performed, self-efficacy plays a role in determining the amount of effort invested and the perseverance. People with high self-efficacy will develop success scenarios that will guide action and help them face the possible obstacles.

The HAPA model has been used as the basis for intervention for modifying risk behaviors like: alcohol consumption (Murgraff& McDermott, 2003) or unhealthy eating habits (Satow&Schwarzer, 1998). It was also used for interventions promoting health-enhancing behaviors: low-fat food consumption (Renner, Knoll, &Schwarzer, 2000) or performing regular breast self-examination (Garcia & Mann, 2003; Luszczynska & Schwarzer, 2003). When applying the HAPA model to preventive behaviors, self-efficacy

has been shown to represent the best predictor of intention and plans of performing breast self-examinations, while planning proved to be the best predictor of the actual behavior (Luszczynska&Schwarzer, 2003).

The Health Belief Model The health belief model (HBM) (Hochbaum, 1958; Rosenstock 1966; Becker, 1974; Sharma and Romas, 2012) is a cognitive model which posits that behaviour is determined by a number of beliefs about threats to an individual's well-being and the effectiveness and outcomes of particular actions or behaviours. Some constructions of the model feature the concept of self-efficacy (Bandura 1997) alongside these beliefs about actions. These beliefs are further supplemented by additional stimuli referred to as 'cues to action' which trigger actual adoption of behaviour. Perceived threat is at the core of the HBM as it is linked to a person's 'readiness' to take action. It consists of two sets of beliefs about an individual's perceived susceptibility or vulnerability to a particular threat and the seriousness of the expected consequences that may result from it. The perceived benefits associated with a behaviour, that is its likely effectiveness in reducing the threat, are weighed against the perceived costs of and negative consequences that may result from it (perceived barriers), such as the side effects of treatment, to establish the overall extent to which a behaviour is beneficial. The individual's perceived capacity to adopt the behaviour (their self-efficacy) is a further key component of the model. Finally, the HBM identifies two types of 'cue to action'; internal, which in the health context includes symptoms of ill health, and external, which includes media campaigns or the receipt of other information. These cues affect the perception of threat and can trigger or maintain behaviour. Nisbet and Gick (2008: 297) summarise the model as follows: 'in order for behaviour to change, people must feel personally vulnerable to a health threat, view the possible consequences as severe, and see that taking action is likely to either prevent or reduce the risk at an acceptable cost with few barriers. In addition, a person must feel competent (have self-efficacy) to execute and maintain the new behaviour. Some trigger, either internal ... or external ..., is required to ensure actual behaviour ensues'. Of course the opposite to much of this is also true. When an individual perceives a threat as not serious or themselves as unsusceptible to it, they are unlikely to adopt mitigating behaviours. Low benefits and high costs can have the same impact. The main elements of the HBM are illustrated in Figure 2. There are a number of reviews and summaries of the model available (Janz and Becker, 1984; Harrison et al 1992; Armitage& Conner 2000; see also Rutter and Quine 2002; Munro et al. 2007; Nisbet and Gick 2008; Webb et al. 2010) Although designed and developed in the healthcare context, the HBM has been applied to the analysis of other types of behaviour, such as recycling (Lindsay and Strathman 1997), and is most suited to explaining or predicting patterns of behaviour. Formal reviews have, however, concluded that it has generally weak predictive power, suggesting it can predict only around 10% of behavioural variance (Harrison et al. 1992). Literature suggests that, of the HBM's components, perceived barriers are the most significant in determining behaviour (Janz and Becker 1984).

The two established criticisms of this model are that its components and rules about their inter-relationships are not well defined, and (in common with other cognitive rational choice based models focused on the individual) that it does not include social or economic or unconscious (e.g. habitual) determinants of behaviour, which are generally considered to be at least as important as the personal cognitive factors covered by the model. Jackson 2005: 133) clearly explains this latter problem: 'this model [rational choice] is inadequate as a basis for understanding and intervening in human behaviours for a number of reasons. In particular it pays insufficient attention to the social norms and expectations that govern human choice and to the habitual and routine nature of much human behaviour. It also fails to recognise how consumers are locked into specific behaviour patterns through institutional factors outside their control.'

Health Behavior Change: Lessons Learned

Four decades of research related to health behavior produced a better understanding of health behavior change. Researchers have examined health behaviors across a wide variety of conditions, persons, and venues and have tested a variety of interventions and theories. Changing one's health behaviors is a more complex process than originally envisioned. New health behaviors often are not maintained. Outcomes that have been achieved in controlled research studies have not been realized clinically. These discrepancies have a significant impact on the health (actual or potential) of the individual and on the health of society.

Healthcare providers overestimate the extent to which people change. All too often, it is assumed that people change their behavior because the evidence supporting the benefits of change is so compelling. Healthcare systems regularly monitor treatment (especially cost and appropriateness) and outcomes, but the relationships between people's use of prescribed treatment and outcomes are seldom included in cost-benefit analysis.Measurement of one's engagement in health behavior change continues to be challenging. Self-reports of behavior are the most extensively used measure of engagement in health behavior. Self-report is accessible and inexpensive; however, it presents the perspective of the individual, a critical but limited picture.

There is a lack of support for a number of previously held assumptions about health behavior change. Socio-demographic characteristics are poor predictors of persons' likelihood to engage in health behaviorchange.Imparting factual information alone often does not result in the maintenance of long-term behavior change. Understanding and enhancing persons' health beliefs (eg, Health Belief Model,Health Promotion Model, and Theory of Reasoned Actionseem to foster initiation but not long-term maintenance of a health behavior. There is evidence that the trajectory of health behavior change seems to have a common pattern. For example, regardless of the behavior, the highest rate of relapse is seen very early after the change, and this has been seen across dieting, smoking cessation, increasing calcium intake, and others. Social factors affect behavior, but social factors can

have either a negative or a positive impact on initiation and maintenance of health behavior change. It is not yet known whether adding a behavior (such as initiating an exercise program) differs from substitution (such as altering food choices), each of which could differ from extinction of a behavior (eg, smoking cessation).

According to Whitehead, there is strong consensus for health promotion among nurses. And although there is a general understanding of health promotion, nurses struggle with understanding theoretical perspective related to health behavior change, best approaches, and evaluation of outcomes. Theory, specifically midrange theory, is useful because it provides an explanation of various situations and phenomenon. Although a great deal has been learned about health behavior change, challenges to nurses and other healthcare professionals are increasing. New theories are needed, theories building on past conceptual and empirical work.

This provides useful information for health professionals to facilitate risk lifestyle modification. Health professionals can optimize people's risk behavior, ensuring that they are: exposed to correct information about risk behaviors; develop a positive intention to perform a health behavior; identify social and personal barriers to performing that behavior; perceive themselves as having enough control over engaging in behavior change; and have a positive affect regarding the behavior and its outcome.

The present review aimed to briefly describe the most important health psychology models that set out to explain and predict health behavior. Also it intended to give an account of their effectiveness in providing a base for successful behavior change strategies. Answering the question *"How does it work?"* helps to identify the psychological means underlying effective behavior change interventions. These can be used to design programs that modify risk behavior to prevent illness and promote health. However, one of the first problems that arise when trying to design efficient health behavior change interventions is that identifying the main predictors of behavior does not mean that one has found the determinants of behavior change. Researchers should focus more on applying the existing theories from health psychology and integrate them with the more advanced evidence-based theory and practice of cognitive-behavioral psychotherapies, in order to identify the determinants of the required change instead of the predictors of the present behavior only. For example, when using the TPB to design and measure the effectiveness of an intervention, one should measure attitudes, subjective norms and perceived behavioral control toward behavior change (Brug, Oenema, & Ferreira, 2005). HBM could be easily integrated with the more validated ABC model of cognitive-behavioral psychotherapies (Beck, 1976; Ellis, 1962), which is the most widespread form of psychological intervention in the clinical practice, the platform of evidence-based clinical practice in psychology.

Another problem with identifying interventions that encourage behavior change is the fact that these do not equal discovering the best psychological change strategies that cause behavior change. This is a consequence of the fact that intervention descriptions are not

explicit about what particular strategies they have used and therefore don't facilitate replication. A solution could be provided by designing randomized control trials (RTCs) to understand what type of interventions promote a certain kind of behavior modification. Also, evaluating theory-based strategies, separately and in combination, can help promote a theory and evidence-based approach to risk behavior change (Michie& Abraham, 2004).

Theories often only suggest *what* needs to be changed in order to generate behavior modification and don't focus on *how* this can be induced. Future studies should explore *how* to translate behavior-change predictors into successful behavior change strategies and intervention tools. For example, in order to increase the impact of intentions on behavior, future behavior change interventions should aim to promote intention stability and implementation intention formation that have been proven to facilitate the translation of intentions into action. Stable intentions were shown to resist situational pressure (Cooke &Sheeran, 2004), reduce the impact of past habits on future performances (Conner, Sheeran, Norman, &Armitage, 2000) and facilitate behavior change maintenance (Conner, Norman, &Bell, 2002). In what concerns implementation intentions, meta-analysis show that their formulation increase rates of behavioral enactment and goal attainment compared to the formation of a single behavioral intention (Sheeran, 2002). This has been explained by the fact that implementation intentions delegate action control to particular situational cues that than elicit performance automatically. The *if-then* plan determines action control to switch from a conscious effort to the automatic control of behavior by situational cues that have been selected in advance (Sheeran, Webb, &Gollwitzer, 2005). Future behavior change interventions should also use non-intentional ways of inducing action such as the formation of habits (Reach, 2005; Webb &Sheeran, 2006). Because intentional behavior change requires motivation and skills but also opportunity to change, additional development of behavior change theory should also center on the use of environmental change strategies like stimulus control (Brug, Oenema, & Ferreira, 2005). Behavioral interventions must also recognize that people live in social, cultural, political, and economic systems that shape behaviors and access to the resources they need to maintain good health.

Many interventions may profit from a multi-theories approach. For example, one theory can be used to identify cognitions related to health while another describes psychological change processes (Kok&Schaalma, 2004). However, following the model of cognitive-behavioral psychotherapies, a cost-effectiveness analysis should be used with these interventions.

Health psychology models and theories provide key underpinning to health promotion and disease prevention programs at all levels of intervention: individual, group and community. According to the statement that "there is nothing more practical than a good theory", discovering and integrating theory-rooted strategies that aim to develop motivation, abilities and environmental conditions that cause intention and behavior change will bring an important contribution the development of a theory and evidence based practice in health

psychology. Their integration into current evidence-based practice based on cognitive-behavioral models could seriously enhance the efficacy and effectiveness of these interventions, their validated theory of change and economical information regarding their cost-effectiveness. Constant research for developing and validating theories make health promotion and disease prevention strategies more effective, and ultimately contribute to the improvement of public health.

Challenges to implementing health education and prevention programmes

Prevention through evidence-based health education intuitively makes sense. Much evidence accumulated over many years of research clearly demonstrates the context in which and the groups for whom behaviour can most effectively be modified. Why, then, does so much evidence generate so little action when it comes to opportunities for prevention strategies to improve the health of our communities? Why do initiatives with proven efficacy in one area fail to be adopted in communities experiencing similar health problems in other locations? The purpose of this section is to explore the barriers and challenges that communities experience in adopting and embracing new prevention strategies. The section concludes with a description of how these obstacles can be addressed and in some cases can be viewed as opportunities.

First and foremost, the strongest ally of any health education effort is the people it serves. Raising public awareness of the issues that affect health and of how the public can influence these issues needs to be the centrepiece of any health education strategy. A noted community health worker once said that while professionals learn through data, communities learn through stories. “Stories can bring both the potential and the consequences to a personal level.” (56) Health education initiatives should be based on the needs and capacities of the local community and on an open and participative process. Next, attention must be focused on the most cost-effective techniques and strategies that exist. While research in this area is ongoing, with many questions still unanswered, sufficient evidence already exists on the magnitude of the health gains that could be gained across populations if certain preventive strategies were put in place. Finally, the old saying “healthy choices should be easy choices” has never been so true. People’s behaviour, for many reasons, tends to gravitate towards the avenue of least resistance. A product that is less expensive, easier to obtain or displayed in a more attractive way is the one that will be chosen. Getting active by going for a walk may be fraught with obstacles such as unsafe neighbourhoods, child support issues or simply lack of motivation. How these issues are addressed through health education and the broader area of health promotion requires creativity and often also an examination of the context in which people regularly make decisions. There are many ways to make healthy choices the easy ones.

Examples include:

• Priority placed by employers on opportunities for physical activity
• The information provided at the point of purchase on the nutrition content of food
• The prominence of physical activity in school programmes
• Elevating the price of tobacco products to discourage potential young smokers.

Module 4

Exercise

Regular exercise can help protect from heart disease and stroke, high blood pressure, noninsulin-dependent diabetes, obesity, back pain, osteoporosis, and can improve your mood and help you to better manage stress. For the greatest overall health benefits, experts recommend that you do 20 to 30 minutes of aerobic activity three or more times a week and some type of muscle strengthening activity and stretching at least twice a week. However, if you are unable to do this level of activity, you can gain substantial health benefits by accumulating 30 minutes or more of moderate-intensity physical activity a day, at least five times a week.

If you have been inactive for a while, you may want to start with less strenuous activities such as walking or swimming at a comfortable pace. Beginning at a slow pace will allow you to become physically fit without straining your body. Once you are in better shape, you can gradually do more strenuous activity.

How Physical Activity Impacts Health

Regular physical activity that is performed on most days of the week reduces the risk of developing or dying from some of the leading causes of illness and death in the United States.

• Reduces the risk of dying prematurely.

• Reduces the risk of dying prematurely from heart disease.

• Reduces the risk of developing diabetes.

• Reduces the risk of developing high blood pressure.

• Helps reduce blood pressure in people who already have high blood pressure.

• Reduces the risk of developing colon cancer.

• Reduces feelings of depression and anxiety.

• Helps control weight.

• Helps build and maintain healthy bones, muscles, and joints.

• Helps older adults become stronger and better able to move about without falling.

• Promotes psychological well-being.

Specific Health Benefits of Exercise

The benefits of exercise extend far beyond weight management. Research shows that regular physical activity can help reduce your risk for several diseases and health conditions and improve your overall quality of life. Regular physical activity can help protect you from the following health problems

Heart Disease and Stroke. Daily physical activity can help prevent heart disease and stroke by strengthening your heart muscle, lowering your blood pressure, raising

your high-density lipoprotein (HDL) levels (good cholesterol) and lowering low-density lipoprotein (LDL) levels (bad cholesterol), improving blood flow, and increasing your heart's working capacity.

High Blood Pressure. Regular physical activity can reduce blood pressure in those with high blood pressure levels. Physical activity also reduces body fatness, which is associated with high blood pressure.

Noninsulin-Dependent Diabetes. By reducing body fatness, physical activity can help to preventand control this type of diabetes.

Obesity. Physical activity helps to reduce body fat by building or preserving muscle mass and improving the body's ability to use calories. When physical activity is combined with proper nutrition, it can help control weight and prevent obesity, a major risk factor for many diseases.

Back Pain. By increasing muscle strength and endurance and improving flexibility and posture, regular exercise helps to prevent back pain.

Osteoporosis.Regular weight-bearing exercise promotes bone formation and may prevent many forms of bone loss associated with aging.

Psychological Effects. Regular physical activity can improve your mood and the way you feel about yourself. Researchers also have found that exercise is likely to reduce depression and anxiety and help you to better manage stress.

Self Esteem And Stress Management. Studies on the psychological effects of exercise have found that regular physical activity can improve your mood and the way you f eel about yourself.

Researchers have found that exercise is likely to reduce depression and anxiety and help you to better manage stress. Disability. Running and aerobic exercise have been shown to postpone the development of disability in older adults

Relaxation

YOGA AND HEALTH

Yoga is an ancient Indian philosophy that dates back thousands of years. It was designed as a path to spiritual enlightenment, but in modern times, the physical aspects of Hatha yoga have found huge popularity as a gentle form of exercise and stress management. There are many different varieties of yoga, but each one essentially relies on structured poses (asanas) practiced with breath awareness. Researchers have discovered that the regular practice of yoga may produce many health benefits, including increased fitness and normalisation of blood pressure. Yoga is arenowned antidote to stress. Over time, yoga practitioners report lower levels of stress, and increased feelings of happiness and wellbeing. This is because concentrating on the postures and the breath acts as a powerful form of meditation.

The classical techniques of yoga date back more than 5,000 years. The practice of yoga encourages effort, intelligence, accuracy, thoroughness, commitment and dedication. The word yoga means 'to join or yoke together'. It brings your body and mind together and is built on three main elements – exercise, breathing and meditation. The exercises of yoga are designed to put pressure on the glandular systems of your body, increasing your body's efficiency and total health. Breathing techniques increase breath control to improve the health and function of body and mind. The two systems of exercise and breathing prepare the body and mind for meditation, with an approach to a quiet mind that allows silence and healing from everyday stress. When practiced regularly, yoga can become a powerful and sophisticated discipline for achieving physical, mental and emotional wellbeing.

The asanas or yoga postures

The different postures of yoga include;

- Lying postures
- Sitting postures
- Standing postures
- Inverted, or upside-down postures.

Health benefits of yoga

Health benefits of yoga include; Cardiovascular system (heart and arteries) – asanas are isometric, which means they rely on holding muscle tension for a short period of time. This improves cardiovascular fitness and circulation. Studies show that regular yoga practice may help normalise blood pressure Digestive system – improved blood circulation and the massaging effect of surrounding muscles speeds up a sluggish digestion

Musculoskeletal – joints are moved through their full range of motion, which encourages mobility and eases pressure. The gentle stretching releases muscle and joint tension, and stiffness, and also increases flexibility. Maintaining many of the asanas encourages strength and endurance. Weightbearingasanas may help prevent osteoporosis, and may also help people already diagnosed with osteoporosis (if practiced with care under the supervision of a qualified yoga teacher). Long-term benefits include reduced back pain and improved posture Nervous system – improved blood circulation, easing of muscle tension and the act of focusing themind on the breath all combine to soothe the nervous system. Long-term benefits include reduced stress, anxiety and fatigue, better concentration and energy levels, and increased feelings of calm and wellbeing.

HEALTHY EATING

Eating a healthy, balanced diet provides nutrients to yourbody. These nutrients give youenergy and keep your heart beating, your brain active, and your muscles working. Nutrients alsohelp build and strengthen bones, muscles, and tendons and also regulate body processes, such as blood pressure.Good nutrition can lower your risk of developing a range of chronic diseases. For example, eating more fruit and vegetables can help lower blood

pressure and may lower your risk of certain types of cancer (such as colorectal, breast, lung and prostate cancer). Eating less saturated fat may also lower your risk of heart disease.

Healthy eating can also help people that already have some types of disease or illness such as diabetes, high cholesterol and blood pressure. In addition, of course, improving your eating habits will contribute to you achieving and maintaining a healthy weight.

Eating nutritiously is a very important part of living a healthy lifestyle. This is something that's been taught for ages, though many people may not understand why it's important. Nutritious eating can keep your weight lower and may even motivate you to live a more active lifestyle.

Eating nutritiously can also help you avoid developing health problems such as sleep apnea, coronary heart disease and stroke, Type 2 diabetes, pregnancy complications, gallbladder disease, osteoarthritis and fatty liver disease.

Lower risk of stroke

Strokes are more common as you get older, but they can happen at any time. The American Stroke Association states that certain risk factors are unchangeable: heredity, sex or gender, age, prior stroke, prior heart attack, race and prior transient ischemic attack or "warning stroke." However, the ASA goes on to state that there are some risk factors that you can treat, control or change. High blood pressure, poor diet and high cholesterol are among these changeable risks. By eating nutritious foods that are low in fat, cholesterol and sodium, you can help reduce your risk of stroke.

Lower risk of heart disease

There are many risks of heart disease, some that can't be changed and some that can. According to the American Heart Association(AHA), the unchangeable risks are sex -- men have more risk of heart attack than women -- heredity and age. The AHA goes on to state that high blood pressure, excess body fat and high cholesterol are among the changeable risks. Keeping yoursodium, cholesterol, saturated fat and trans fat intake low can help keep your heart healthier and at less risk for disease.

Prevent type 2 diabetes

Nutritious eating habits that can help prevent diabetes include choosing foods with more fiber, such as whole grains and fresh fruits and vegetables. A high -fiber diet improves your ability to control blood sugar and can help you lose weight by making you feel more full so you don't overeat.

Positive mental state

A healthy diet doesn't just affect your body; it also affects your mind. Not only can you be more motivated to get active, but the endorphins from that activity keep you happy. One healthy eating choice you can make that will help improve your mental state is cutting back on refined sugar. According to the National Alliance on Mental Illness(NAMI), increased refined sugar intake may lead to higher rates of depression.

Relaxation

Relaxational techniques include 1)progressive muscle relaxation 2) meditative relaxation 3) mindfulness meditation and guided imaginary. All four approaches have demonstrated some success in helping patients manage stress and anxiety, headache pain, postoperative pain, and low back pain.

Hypnosis is an altered state of consciousness in which a person's stream of consciousness is divided or dissociated. This altered state of consciousness allows people to respond to suggestion and to control physiological processes that they cannot control in the normal state of consciousness. Debate still exists over the exact nature of hypnotic treatment, but there is little argument thathypnosis can be a powerful analgesic for managing pain. The benefit of hypnotherapy varyindividually, but for suggestible people, hypnotic processes are an effective means of treatingheadache, cancer pain, burn pain, preoperative distress, postoperative pain, headache and low back pain.

Behavioral techniques

Behavioral techniques used for the management of pain are relaxation training, hypnotic techniques, biofeedback, and cognitive behavior therapy.

In biofeedback, biological responses are measured by electronic instruments, and the status of those responses is immediately available to the person being tested. This feedback allowsthe person to alter physiological responses that can not be voluntarily cotrolled without the biofeedback information. Biofeedback can be effective procedure- either alone or in combination with other techniques- for lessening some kinds of pain. Electromyograph(EMG) feedback and thermal biofeedback are effective alleviating migraine and tension headache and reducing low back pain, but biofeedback is usually no more effective than relaxation or hypnosis.

Cognitive behavioral therapy draws upon operant conditioning and behavior modification, which offer reinforcement for appropriate behaviors and withhold reinforcement for inappropriate behaviors, and cognitive therapy, which strives to change behavior through changing attitudes and beliefs. Behavior modification can be effective in helping pain patients become more active and decrease their dependence on medication, but this approach does not address the negative emotions and suffering that accompany pain. Cognitive therapy addresses feelings and thus helps in reducing the catastrophizing that exacerbates pain. Congnitivebehavioral therapists attempt to get patients to think differently about their stress and pain experiences and teach strategies the lead to more effective self management. Stress and pain inoculation are types of cognitive behavioral therapy that introduce low levels of stress or pain and then teach skills for coping. Inoculation therapies have been successful in treating performance anxiety, schools-related anxiety, posttraumatic stress, and knee injury pain of athletes. Other types of cognitive behavioral therapy have been successful in treating low back pain, headache pain, rheumatoid arthritis pain, fibromyalgia, and pain that accompanies cancer and AIDS.

Cognitive behavioral therapy is effective for a wide range of problems in a variety of people. Emotional disclosure calls for patients to disclose strong negative emotions, most oftenthrough writing. People using this technique write about traumatic life events for 15 to 20 minutes, three or four times a week. Emotional disclosure generally enhances health, relieves anxiety, reduces visits to health care providers, and may reduce the symptoms of asthma, rheumatoid arthritis, and cancer.

Cancer related behaviour- Psycho social Intervention

Psychosocial approaches for helping individuals cope with their cancers can begin in the diagnostic interview with the physician (Roberts et al., 1994). The physician can promote positive adaptation to the illness by discussing the diagnosis while the patient is alert with a spouse or other significant person present, expressing concern and giving the people an opportunity to react emotionally and compose themselves, and then presenting information about the prognosis and treatment options. Medical personnel can also help by providing information on ways to manage the disease and difficult aspects of treatment and advice on improving the patient's diet and physical activity (Helgeson et al., 1999; Pinto, Eakin, & Maruyama, 2000). Exercise, such as brisk walking several hours a week, enhances the physical function of cancer patients and may improve their survival (Markes, Brockow, &Resch, 2006). Psychosocial interventions have been applied to deal with several difficulties of cancer patients, and we'll focus on ones to reduce patients' nausea from chemotherapy, reduce their physical pain, and improve their emotional adjustment and quality of life. Two successful approaches to reduce nausea are relaxation and systematic desensitization (Redd& Jacobsen, 2001). For example, one study found that training patients to use progressive muscle relaxation and imagery before and during chemotherapy sessions sharply reduced the development of nausea after the first session (Burish& Jenkins, 1992). Another study showed that systematic desensitization can help people who have already developed anticipatory nausea (Morrow et al., 1992). Patients used relaxation techniques while they imagined increasingly difficult scenes relating to chemotherapy, such as driving to the clinic or entering the waitingroom. These individuals reported much less nausea and vomiting in subsequent chemotherapy sessions. Not all patients benefit from these techniques, partly because they don't believe psychosocial approaches will help (Carey &Burish, 1988). Cancer pain is a serious problem when the illness is in advanced stages, especially in the last months before death (Butler et al., 2003). Although treatment with narcotic drugs is very useful, psychosocial interventions can also help (Keefe, Abernathy, & Campbell, 2005). For example, researchers compared cancer pain patients who were randomly assigned to three groups (Dalton et al., 2003). A control group received usual medical care and two experimental groups received cognitive–behavioral treatment; one used a standard approach, and other was tailored to address specific difficulties assessed with psychological tests. The cognitive–behavioral treatments used a variety of methods, such as relaxation and problem-solving training. The patients in both of these groups, especially the tailored treatment group,

reported having less pain and engaging in more daily activities than the usual care group. Other interventions have been applied successfully to improve cancer patients' adjustment to their illnesses and quality of life (Meyer & Mark, 1995). For example, a cognitive–behavioral stress management program had breast cancer patients meet for 2 hours weekly in groups to discuss their difficulties and learn methods, such as relaxation and coping strategies, to apply at home (Antoni et al., 2001; McGregor et al., 2004). The program improved their adjustment in two ways: it reduced the prevalence of depression and increased their use of positive reappraisal strategies, such as seeing benefits to their condition; these effects were strongest among women whose optimism was low at the start. And the program enhanced the women's immune function. This program also has been found to reduce women's cancerrelated anxiety, general anxiety symptoms, cortisol levels, and levels of inflammation (Antoni et al., 2009). The main factor in the success of this stress management program is the patients' learning skills that allow them to relax at will (Antoni, Lechner et al., 2006). Mindfulness-based stress reduction has been found to reduce depressive symptoms and other indications of emotional distress in cancer patients (Ledesma& Kumano, 2009; Lengacher et al., 2009). Various types of supportive therapies and coping skills training also help manage cancer patient's depressive reactions (Akechi et al., 2008; Manne et al., 2007). When these therapies are delivered in group settings, higher levels of group cohesion are associated with treatment outcomes (Andersen et al., 2007; Schnur& Montgomery, 2010). Because of the social problems cancer patients face, theyand their families may benefit from family therapy and attending support groups that include education, group discussion, and coping skills training (Helgeson& Cohen, 1996; Scott, Halford, & Ward, 2004). Couples-focused treatments can be effective in treating distress in women with breast cancer, especially for women whose coping style involves approach rather than avoidance (Manne, Ostroff, &Winkell, 2007). For men with prostate cancer, cognitive-behavioral stress management can improve sexual functioning (Molton et al., 2008).

SUBSTANCE ABUSE

''I just can't get started in the morning without a cup of coffee and a cigarette—I must be addicted,'' you may have heard someone say. The term addicted used to have a very limited meaning, referring mainly to the excessive use of alcohol and drugs. It was common knowledge that these chemical substances have psychoactive effects: they alter the person's mood, cognition, or behavior. We now know that other substances, such as nicotine and caffeine, have psychoactive effects, too—but people are commonly said to be ''addicted'' also to eating, gambling, buying, and many other things. How shall we define addiction?

ADDICTION AND DEPENDENCE

Addiction is a condition, produced by repeated consumption of a natural or synthetic psychoactive substance, in which the person has become physically and psychologically dependent on the substance (Baker et al., 2004). Physical dependence exists when the body

has adjusted to a substance and incorporated it into the ‘‘normal’’ functioning of the body’s tissues. For instance, the structure and function of brain cells and chemistry change (Torres & Horowitz, 1999). This state has two characteristics:

1. Tolerance is the process by which the body increasingly adapts to a substance and requires larger and larger doses of it to achieve the same effect. At some point, these increases reach a plateau.
2. Withdrawal refers to unpleasant physical and psychological symptoms people experience when they discontinue or markedly reduce using a substance on which they have become dependent.

The symptoms experienced depend on the particular substance used, and can include anxiety, irritability, intense cravings for the substance, hallucinations, nausea, headache, and tremors. Substances differ in their potential for producing physical dependence: the potential is very high for heroin but appears to be lower for other substances, such as LSD (Baker et al., 2004; NCADI, 2000; Schuster &Kilbey, 1992).

Psychological dependence is a state in which individuals feel compelled to use a substance for the effect it produces, without necessarily being physically dependent on it. Despite knowing that the substance can impair psychological and physical health, they rely heavily on it—often to help them adjust to life and feel good—and spend much time obtaining and using it. Dependence develops through repeated use (Cunningham, 1998). Users who are not physically dependent on a substance experience less tolerance and withdrawal (Schuckit et al., 1999). Being without the substance can elicit craving, a motivational state that involves a strong desire for it. Users who become addicted usually become psychologically dependent on the substance first; later they become physically dependent as their bodies develop a tolerance for it. Substances differ in the potential for producing psychological dependence: the potential is high for heroin and cocaine, moderate for marijuana, and lower for LSD (NCADI, 2000; Schuster &Kilbey, 1992). The terms and definitions used in describing addiction and dependence vary somewhat (Baker et al., 2004). But diagnosing substance dependence and abuse depends on the extent and impact of clear and ongoing use (Kring et al., 2010). Psychiatrists and clinical psychologists diagnose substance abuse when dependence is accompanied by at least one of the following:

- Failing to fulfill important obligations, such as in repeatedly neglecting a child or being absent from work.
- Putting oneself or others at repeated risk for physical injury, for instance, by driving while intoxicated.
- Having substance-related legal difficulties, such as being arrested for disorderly conduct. Psychiatric classifications of disorders now include the pathological use of tobacco, alcohol, and drug

Inappropriate Medication Seeking Behavior

People who misuse prescription drugs most commonly seek prescriptions for opioids and benzodiazepines. Other prescription drugs that are misused include the newer antipsychotics such as quetiapine and olanzapine, and stimulants such as dexamphetamine and methylphenidate.Health professionals should be aware of behaviours that may indicate drug seeking, but dependency on prescription drugs can occur at any age, within any cultural group and across any educational class. Patients with dependencies may not necessarily display obvious drug-seeking behaviours.All general practices should have a practice policy on prescribing drugs of dependence. GPs should register with the Prescription Shopping Information Service.

There is strong evidence in Australia of increasing harms from prescription drugs of dependence, including deaths from overdose. Before prescribing any drug of dependence, health professionals require an understanding of the patient's biopsychosocial status, and the evidence-based indications and potential significant harms of these drugs.

Benzodiazepines and opioids are the two most common classes associated with drug-seeking behaviour. Opioids commonly misused in Australia include oxycodone, fentanyl, codeine and morphine.Psychotropic drugs producing stimulant effects, euphoria, sedation or hallucinatory effects are sometimes sought. These include the newer antipsychotics quetiapine and olanzapine, and stimulants such as dexamphetamine and methylphenidate.[2] Anabolic steroids are also increasingly misused.

Misuse of medicines

The National Drug Strategy Household Survey 2013 found that misuse of prescribed drugs of dependence has increased for many years, while the proportion of people using most illegal drugs has remained relatively stable.[3] Opioid misuse in Australia now mainly involves opioids obtained on prescription.[4] Oxycodone was the seventh leading drug prescribed in general practice in 2014.[2] Data from needle and syringe programs in Australia show that in 7% of injecting episodes 'the last drug injected' by their clientele in 2000 was a prescription opioid. This rose to 27% in 2010.[2] There have been large increases in opioid prescribing,[5] with the total number of prescriptions on the Pharmaceutical Benefits Scheme (PBS) increasing about threefold between 1992 and 2007 (2.4 million to 7 million scripts).

Over-the-counter combinations of codeine with paracetamol or ibuprofen have caused serious harms when misused.[6] Complications of overdose with the ibuprofen/codeine combinations can be life threatening and include gastrointestinal bleeding, perforation, hypokalaemia, renal failure, anaemia and opioid dependence.In the last 10 years, benzodiazepine prescribing has increased, but there has also been a dramatic change in the profile of the benzodiazepines prescribed. Over a five-year period the prescription of alprazolam increased by a third, particularly on private (non-PBS) prescriptions.[7] The PBS-subsidised use of alprazolam, for the treatment of panic disorder, changed from Schedule 4

to Schedule 8 in February 2015 and it is expected that this will result in a decline of prescriptions for alprazolam. However all benzodiazepines can be misused.

Harms of misuse

Many coroners' inquests have drawn attention to deaths due to prescription opioids and psychotropic drugs. Most Australian deaths involving oxycodone were caused by combined drug toxicity. The most commonly co-administered drugs included benzodiazepines, alcohol and other opioids which in combination can cause respiratory depression. Approximately 12% of deaths were identified as due to oxycodone toxicity alone.[1]

Patterns of drug-seeking behaviour, intoxication and withdrawal states can affect patients' relationships, employment and finances. Misuse of prescription drugs is associated with crime and consequent incarceration. Harms extend to the wider community and include robbery, theft, identity fraud, extortion and the manufacture of illicit drugs. Traffic accidents and disorganised behaviour can have consequences for both the patient and community. Harms associated with the injection of prescription drugs include an increased risk of acquiring blood-borne viruses and other adverse effects of unsafe injecting.

Recognition of drug-seeking behaviour

Dependency on prescription drugs may occur at any age, within any cultural group and across any educational class. GPs should be aware of drug-seeking behaviours, but some patients seeking drugs of dependence may present without these behaviours. Common contexts within which drug-seeking occurs include:

- Typical requests and complaints
- Aggressively complaining about a need for a drug
- Asking for specific drugs by name
- Asking for brand names
- Requesting to have the dose increased
- Claiming multiple allergie

Early Intervention

Efforts for early intervention try to identify people at high risk for substance abuse and then provide information to reduce that risk (Ashley & Rankin, 1988). Although early intervention can be used for smoking and drug use, we'll focus on alcohol use. Most high-risk drinkers are identified on the basis of current drinking patterns or problems, such as being charged with drunk driving. Although interventions for them have been successful only with people who are relatively light drinkers—heavy drinkers often get worse after an intervention (McGuire, 1982)—the picture is brighter for interventions with most other people who are at high risk for abusing alcohol. If drinking problems are detected early, successful interventions can simply involve giving information and advice, and the

individuals may be able to reduce their drinking to a moderate level (Ashley & Rankin, 1988; NIAAA, 1993; Sobell et al., 2002). Early interventions have been successful with highrisk drinkers identified at colleges, in medical settings, and at worksites; these people are often identified by having them fill out a survey that includes questions on drinking. In medical settings, identified high-risk drinkers who received an intervention of information and advice on reducing drinking incurred lower expenses for health care and for legal and motor vehicle events over the next year than did drinkers who did not get the intervention(Fleming et al., 2000). In worksites, many employers and unions provide employee assistance programs (EAPs) to help individuals who have personal problems, such as with drinking or stress (USDHHS, 1990). EAPs can be helpful, but workers with addictions seek help far less often than workers with other problems (Chan, Neighbors, &Marlatt, 2004). This may be because EAPs usually don't identify high-risk drinkers until the problem is severe, and workers may worry that counselors will leak information to their bosses. A worksite should be a good place for preventing alcohol abuse because most individuals who abuse alcohol have jobs, and drinking is often related to stress on the job (Mayer, 1983).

Module 5

CANCER

Cancer is a group of diseases characterized by the presence of new cells that grow andspread beyond control. Cancer is not unique to humans; all animals get cancer, as do plants. In addition to the diverse causes of cancer, many different types exist. The most common characteristic found in all types of cancer is the presence of neoplastic tissue cells. neoplastic tissue cells are characterized by new and nearly unlimited growth that robs the host of nutrients and that yield no compensatory beneficial effects. Neoplastic cells may be benign and malignant. Benign growths tend to remain localized , whereas malignant tumors tend to spread and establish secondary colonies. Benign tumours are less threatening than malignant tumor, but not all benign tumours are harmless. Malignant tumours are much more dangerous because they invade and destroy surrounding tissue and may also move or metastasize through blood or lymph and thus spread to other sites in the body. Malignant growths can be divided into four main groups—carcinomas, sarcomas, leukemias and lymphomas. Carcinomas are cancers of the epithelial tissue, cells that lines, cells that line the outer and inner surfaces of the body, such as skin, stomach lining, and mucus membranes. Sarcomas are cancers that arise from cells in connective tissue, such as bone, muscles and cartilage. Leukemias are cancers that originate in the blood or blood forming cells, such as stem cells in the bone marrow. These three types of cancers- carcinomas, sarcomas, and leukemias- account for more than 95% of malignancies. The fourth type of cancer is lymphoma, a cancer of the lymphatic system, which is one of the rarer types of cancer.

Risk factors for cancer

The risk factors for cancer mainly divided in to inherent risk factors, environmental risk factors and behavioral risk factors.

Inherent risk factors

Inherent risks for cancer include family history, ethnic background, and advancing age.

Although cancer is seldom inherited, family history and genetic predisposition play a major role in its development. A woman who has a mother or sister with breast cancer has a two-to threefold higher chance of developing the disease. African American have a higher cancer incidence and higher death rates than European Americans, but people from other ethnic backgrounds have a lower incidence. These differences are due not to biology but to differences in socioeconomic status, knowledge about cancer, and attitude toward the disease.

The strongest risk factor for cancer- as well as many other diseases – is advancing age. The older one becomes, the greater one's risk for cancer. Both men and women

increase their risk for cancer as they get older, but men have an even greater increase than women

Environmental risk factors

Environmental risks may also contribute to cancer incidence and death. Environmental risk factors include exposure to radiation. Asbestos , pesticides, motor exhaust, and other chemicals and may also include living near a nuclear facility. In addition, arsenic, benzene, chromium. nickel, vinyl chloride, and various petroleum products are possible suspects in a number of cancers (Boffetta, 2004; Siemiatycki et al., 2004).

Behavioral risk factor

A number of behavioral cancer risk factor have been identified. These risk factors are not necessarily causes of a disease, but they do do predict the likelihood of a person's developing or dying from that disease. Most risk factors for cancer relate to personal behavior and life style, especially smoking and unhealthy diet. Cigarette smoking is the leading risk factor for lung cancer. Evidence suggests that a high fat diet is only slightly related to cancer of the lung, digestive system, and excretory system. Other known behavioralrisk includes alcohol, physical inactivity, exposure to ultraviolet light, sexual behavior, and psychosocial factors. Alcohol isprobably only a weak risk factor for cancer. Nevertheless, it has a synergistic effect with cigarette smoking; when the two are combined, the total relative risk is much greater than the risks of the two factors added together. Lack of physical activity and high exposure to ultraviolet light are additional risk factors for cancer. In addition, certain sexual behaviors, such as number of life time sex partners, relate to both cervical and prostate cancer as well as to cancersassociated with AIDS. In general, psychosocial factors are only marginally related to cancerincidence or mortality. Feeling of helplessness and repression of emotion contribute to an unfavorable outcome for cancer patients, but the relationships are not strong.

Treatment

After people have been dignosed with cancer, they typically experience fear, anxiety, depression, and helplessness. The standard medical treatment for cancer are surgery, chemotherapy and radiation. All have negative side effects that often produce added stress. Surgery is often recommended when cancerous growth has not yet metastatized and when physicians have some confidence that the surgical procedure will be successful and that thecancer will not return. Cancer patients who undergone surgery are likely to experience distress, rejection and fears, and they often receive less emotional support than other surgery patients. Radiation also have severe side effects. Many patients who receive radiation therapy anticipate their treatment with fear and anxiety, dreading loss of hair, burns , nausea, vomiting , fatique and sterility. Chemotherapy has some of the same negative side effects as radiation at least half of the cancer patients treated with

chemotherapy experience some combination of nausea, vomiting, fatique, loss of coordination, decreased ability to concentrate, depression, weight change, loss of appetite, sleep problems, hair loss, and a feeling of being out of control (Burish, Myerowitz, Carey, & Morrow, 1987).

Although receiving strong social support, joining support groups. And receivingemotional support probably will not increase survival time of cancer patients, they are likely to enhance quality of life, increase psychological functioning, and reduce sensation of pain.

AIDS AND POSITIVE HEALTH PSYCHOLOGY

Health psychologists play an important role in managing the epidemic of AIDS in the sense that they can act as educators and develop behavioral modification programs for individuals that will discourage the risky behaviors that are associated with the transmission of the disease which are mainly unprotected sex and intravenous drug use via the sharing of needles (Brannon &Feist, 2004). An additional role that health psychologist play in the AIDS epidemic is assisting those who are already infected so that they may have positive experiences in their life which will improve the quality of their life, fend off severe depression, and encourage them to adopt positive health-related behaviors such as maintaining their recovery drug regime and halting their risky behaviors (Brannon &Feist, 2004).

Health psychologists can conduct community focus groups to help those who are at risk for contraction of HIV understand that they must put their knowledge of risky behavior into action, such as encouraging and educating individuals about making sure they actually use condoms (Forrest, 1993). Even though many people are aware that condoms and safe sex are preventative factors they do not execute their knowledge upon their behavior and therefore are at risk. There is often a great deal of risk-denial in communities that are at risk, such as women who participate in heterosexual relationships without condoms with men who may not be in monogamous relationships (Brannon &Feist, 2004; Sobo, 1993).

Further, health psychologists can work with schools and communities to discuss the risks for high school children for developing the disease by explaining that health behavior model and enforcing the need to protect themselves sexually with the understanding that the results of AIDS are so severe that they outweigh the inconvenience of having safe sex practices (Walter, 1992). By understanding and identifying behaviors that contribute to the transmission of HIV/AIDS with high school and college students effective behavioral patterns can be identified and changed to reduce the risk of transmitting the fatal disease (Goldman, 1993).

Hypertension

One common physical ailment that can be affected by psychological issues is hypertension. Hypertension is the medical term for chronically high blood pressure. There

are many other medical conditions that hypertension can increase the risk of, including heart disease, aneurism and kidney disease. It can even lead to premature death.

There are many causes of hypertension, including salt intake, genetics and environmental factors. However, in addition to these, there are several psychological conditions that can directly or indirectly affect hypertension.There are two main ways that psychological factors can influence physical conditions: direct and indirect. Direct factors lead to a physical complication just because you have the psychological issue. For example, depression is a direct factor on insomnia; just having depression can lead to insomnia. Compare that to indirect factors, which lead to physical complications because of the way the psychological issue impacts your behaviors. For example, anxiety can be an indirect factor for lung cancer, since people who feel anxious often smoke to relieve their anxiety, and smoking can lead to lung cancer. Studies have shown that a higher proportion of people with anxiety have lung cancer than the general population. However, that doesn't mean that the studies have found that anxiety is a direct cause of lung cancer, only that the two go together in some way. When two things go together, but are not cause-and-effect, it is called a correlation. Let's look at two common physical ailments and how they can be affected by psychological issues.

DIABETES

Diabetes, often referred as diabetes mellitus, describes a group of metabolic diseases in which the person has high blood glucose (blood sugar), either because insulin production is inadequate, or because the body's cells do not respond properly to insulin, or both.

There are three types of diabetes:

1) Insulin Dependent Diabetes Mellitus (Type 1 Diabetes)
   The body does not produce insulin. Some people may refer to this type as insulindependent diabetes, juvenile diabetes, or early-onset diabetes. People usually develop type 1diabetes before their 40th year, often in early adulthood or teenage years. Patients with type 1 diabetes will need to take insulin injections for the rest of their life. They must also ensure proper blood-glucose levels by carrying out regular blood tests and following a special diet.
2) Non Insulin Dependent Diabetes Mellitus (Type 2 Diabetes)
   The body does not produce enough insulin for proper function, or the cells in the body do not react to insulin (insulin resistance). Approximately 90% of all cases of diabetes worldwide are of this type. Some people may be able to control their type 2 diabetes symptoms by losing weight, following a healthy diet, doing plenty of exercise, and monitoring their blood glucose levels.
3) Gestational Diabetes
   This type affects females during pregnancy. Some women have very high levels of glucose in their blood, and their bodies are unable to produce enough insulin to

transport all of the glucose into their cells, resulting in progressively rising levels of glucose. Diagnosis of gestational diabetes is made during pregnancy. The majority of gestational diabetes patients can control their diabetes with exercise and diet. Diabetic must maintain a strict regimen of diet, exercise and insulin supplements to avoid the serious cardiovascular, neurological, and renal complications of the disorder.

CORONARY HEART DISEASES

The cardiovascular system consists of the heart and blood vessels. The heart pumps blood, which circulates throughout the body, supplying oxygen and removing waste products. The coronary arteries supply blood to the heart itself, and when atherosclerosis affects this arteries, Coronary Heart Diseases [Coronary Heart Disease also known as Coronary Artery Disease (CAD), Atherosclerotic heart disease Or Ischemic Heart Disease (IHD)] occurs. Atherosclerosis refers to the buildup of fats and cholesterol in artery walls (plaques), which can restrict blood flow. The restriction can cause angina pectoris, with symptoms of chest pain and difficulty in breathing. Blocked coronary arteries can also lead to a myocardial infarction (heart attack). When the oxygen supply to the brain is disrupted, stroke occurs. Stroke can affect any part of brain and can vary in severity from minor to fatal. Hypertension – high blood pressure- is a predictor of both heart attack and stroke.

Causes

Although the causes of cardio vascular disease are not fully understood, an accumulating body of evidence points to certain risk factors, these factors includes such inherent risks as advanced age, problems in glucose metabolism, family history of heart disease, gender and ethnic background. As people become older, their risk for cardiovascular death rises sharply.

Problems in glucose metabolism are a condition in which glucose cannot be taken into the cells because of problems in producing or using insulin. When this situation occurs, glucose remains in the blood at abnormally high levels. People with a history of cardio vascular disease in their family are more likely to die of heart disease than those with no such history. Gender is another inherent risk factor. Men have a higher rate of death from coronary heart disease than women, this discrepancy shows most prominently during the middle-age years. In the United States ,

African Americans have more than 30% greater risk for cardio vascular deaths than European Americans. Other risk factors include physiological conditions such as hypertension and high serum cholesterol levels. Other than age ,hypertensionis the best predictor of coronary heart disease and a dose- response relationship exists between blood pressure level and riwsk for heart disease.

Behavioral conditions such as smoking and imprudent eating also related to the heart disease. Cigarette smoking is a behavior that is associated with increased risk for heart

disease worldwide, but non smokers exposed to other people's tobacco smoke probably have only a very slight risk. Eating foods high in saturated fat and consuming loelevels of fruits and vegetables add to one's risk for heart disease.

Researchers have identified a number of psychosocial factors that relate to heart disease. It includes education, income, marital status, social support, stress, anxiety, depression, cynical hostility, and anger. Low educational level and low income are risk factors for cardiovascular disease. There is a possibility that people with low education are much more likely to be overweight, have higher blood pressure, and have less access to the health care system(Molarius, Seidell, Sans, Tuomilehto&Kuulasmaa, 2000). Income level is another risk factor forcardiovascular disease; people with lower incomes have higher rates of heart disease than peoplein the higher income brackets. Lacking social support is also a risk for cardiovascular disease.

Young adults who rated themselves as lonely showed different cardiovascular system responses than those who felt less lonely(Hawkley, Burleson, Berntson&cacioppo, 2003).women with high levels of emotional support and good social integration showed less coronary artery blockage than those with poorer social contacts. Marriage should provide social support, and in general, married people are at decreased risk for cardiovascular diseases. Quality of the marital relationship is also a factor.: women who reported that they were satisfied in their marriage had lower levels of several risk factors than those who are satisfied with their marriage (troxel, Mathews, Gallo &Kuller, 2005). Stress ,, anxiety and depression are related to cardiovascular diseaseeven after controlling for other risk factors such as smoking and cholesterol, anxiety and depressionare factors that predict the development of cardiovascular disease(Everson-Rose&Lewis,2005; Gallo & Mathews, 2003). In recent years , researchers have found thatsome type of hostility and anger are risk factors for cardiovascular diseases. Anger can be defined as an unpleasant emotion accompanied physiological arousal, whereas hostility involves a negative attitude toward others. Redford Williams. 1989 suggested that one type of hostility- cynical hostility- is especially harmful to cardiovascular health And people who mistrust others, think the worst of humanity and interact with others in cynical hostility are harming themselves and their hearts. People who use anger as a response to interpersonal problems have an elevated risk for heart disease. Studies suggest that suppressed anger may be more toxic than forcefully expressing anger

AGEING

Ageing the process of growing old or developing the appearance and characteristics of oldage. Ageing is a phase of life and a biological process. Every organism that is born must aged withtime and decay. Human concern about the phenomenon of ageing is very old. Biological agingresults in part from a failure of body cells to function normally or to produce new body cells toreplace those that are dead or malfunctioning. Normal cell function may be lost through infectiousdisease, malnutrition, exposure to environmental

hazards, or genetic influences. Among body cellsthat exhibit early signs of aging are those that normally cease dividing after reaching maturity.Geropsychology is a field within psychology devoted to the study of aging and the provision ofclinical services for older adults.

Physiological problems

The most widespread condition affecting those 65 and older is coronary heart disease,followed by stroke, cancer, pneumonia and the flu. Accidents, especially falls that result in hipfractures, are also unfortunately common in the elderly. A lot of our elders are coping with at leastone of the following conditions, and many are dealing with two or more of the following: Heartconditions (hypertension, vascular disease, congestive heart failure, high blood pressure andcoronary artery disease) , Dementia, including Alzheimer's disease , Depression , Incontinence(urine and stool) , Arthritis , Osteoporosis ,Diabetes , Breathing problems , Frequent falls, whichcan lead to fractures , Parkinson's disease , Cancer , Eye problems (cataracts, glaucoma, MacularDegeneration)

As the body changes, other things to be aware of are:

- A slowed reaction time, which is especially important when judging if a person can drive.
- Thinner skin, which can lead to breakdowns and wounds that don't heal quickly
- A weakened immune system, which can make fighting off viruses, bacteria and diseases
- Diminished sense of taste or smell, especially for smokers, which can lead to diminished
- appetite and dehydration

Psychosocial/Emotional Issues

Older adults and their family members/caregivers often encounter new and challengingpsychosocial issues that accompany aging. As with any stage in the life cycle, there are adjustmentsto made and social and emotional responses that need to be handled.Older adults may face many changes in the social context of their lives. Retirement is oftenthe major change. It brings into question what next, which may be frightening and confusing. Lossof ones peers through relocation and/or death also occurs. Feelings of abandonment and lonelinessare common. At times, individuals feel adrift with little sense of purpose to their lives. They mayalso face increasingly poor health that renders them less independent. The feelings of dependencyare usually unwelcome and may create a sense of shame and embarrassment.Emotional responses vary for each individual. Many, however, experience some type ofdepression due to the changes of aging. There are feelings of sadness, anger, and fear. Mood swingsare often common and distressing to the person experiencing them as well to those close to him/her.

Family members of older adults also react to the changes of aging. Often, the dynamics and previous balance in the family are altered. This can be a difficult adjustment for all concerned,particularly if roles shift and some family members (particularly adult children) take on caregivingresponsibilities. Feelings of resentment and anger may surface. The older adult may feel like aburden and the caregivers may well feel burdened Communication among family members may be compromised. Painful feelings andresponses are difficult to verbalize and may be swept under the rug. Illness and disability maypresent barriers to conversation. Counselling and support services are often useful in managingthese issues. They can promote more open communication as well as help to examine alternative

Terminal Illness

When people talk about the hypothetical prospects of dying, you will often hear them say, ‘‘I hope I go quickly and without pain.’’ Some people might argue that there are no good ways to die, but almost everyone would agree that a slow and painful death is the worst way. By definition, a terminal illness entails a slow death. The patient typically suffers a progressive deterioration in the feeling of well-being and ability to function and may also experience chronic pain. Although dying from a terminal illness generally takes several weeks, it sometimes takes as little as a few days or as long as several months (Hinton, 1984). Much of this time is spent in a hospital. One factor that affects how people adapt to a terminal illness is the age of the victim.

Most people in developed nations die in hospitals or nursing homes (Hays et al., 1999). Although hospitals can provide a great deal of expertise, technical equipment, and efficient caregiving, they are usually not ‘‘psychologically comfortable’’ places for people. The environment there is unfamiliar, and patients have little control over their daily routine and activities and lack access to such things as photo albums or musical recordings, for example, that they have relied on in the past for enjoyment and to enrich their experiences. Moreover, most of the people there are strangers, not family or friends. As a result, many terminally ill people would rather die at home.

Psychosocial Adjustments To Terminal Illness

Most people with life-threatening illnesses adapt reasonably well to their conditions over time, and so do the closest people in their lives. But when their conditions worsen and progress to a terminal phase, new crises emerge that require intense coping efforts. How People Cope with Terminal Illness How do terminally ill people and their families cope, and what types of stress do they experience? The principal coping mechanism people use during the phase of terminal illness is denial (Hackett & Weisman, 1985;Hinton, 1984). As we saw in Chapter 5, emotion-focused coping is especially useful when the individuals cannot do anything to change their situations. Unfortunately, when people mutually avoid facing the imminent death, they may not discuss with each other how they feel or have any way to ‘‘say their good-byes.’’ Psychiatrist John Hinton (1984) has described three types of stress

terminal patients experience. First, they must cope with the physical effects of their worsening conditions, such as pain, difficulty breathing, sleeplessness, or loss of bowel control. Second, their conditions severely alter their styles of living, restricting their activity and making them highly dependent on others. Most terminally ill people are restricted in their activities during the last 3 months of their lives, and many of them are confined to bed. Third, they typically realize that the end of their lives is near, even when they are not told so. If they are in a hospital, they may think about never going home again or no longer being able to experience the intimacy they used to have with those they love. Thinking about someone who is dying typically arouses feelings of sadness in people, but these people may not realize how well many terminally ill people come to face and accept dying. Hinton (1984) has noted similarities between people who are dying and those with diminished lives—such as the frail, disabled, or bereaved: they can still get pleasure from their lives despite earlier thoughts that such circumstances would be unbearable. The quality of life for such persons can be fairly good if they have a sense of fulfillment, such as from the family they'll leave behind or their career. Most people adapt to dying with little anger or depression if they are in little pain, receive sensitive and caring social support, feel satisfied with their lives, and have a history of coping well with life's problems and crises (Carey, 1975; Hinton, 1984; Kalish, 1985). Often, patients adapt better than their loved ones. For instance, spouses of dying people often experience increased health problems, depression, and memory difficulties (Howell, 1986). Support groups and family therapy can be of great help to dying individuals and their families.

DEGENERATIVE NEUROLOGICAL DISORDER

Degenerative neurological diseases cause abnormal changes to brain cells and usually have a clinical pattern that can be diagnosed. These diseases cause increasing disruption to neurological function as the disease progresses. Common examples of degenerative neurological diseases are Multiple Sclerosis, Huntington's disease, Parkinson's disease, Motor Neurone disease and Alzheimer's disease. These brain injuries are different from those cased by trauma, stroke, hypoxia etc in that the brain injury will get progressively worse as the disease progresses.

Alzheimer's disease

Alzheimer's disease is a progressive, degenerative disease of brain, is a major source of impairment among older people. It affect cognitive functioning, especially memory. The memory loss may first appear in the form of small, ordinary failures of memory. This memory loss progresses to the point that Alzheimer's patients fail to recognize family members and forget how to perform even routine self-care. Other symptoms include agitation and irritability, paranoia and other delusions, sleep disorders, depression, incontinence, and sexual problems.

Although difficulties in staying asleep are common among older adults, Alzheimer's patients have even more severe problems than their peers (Tractenberg, Singer & Kaye, 2005). As aresult these patients tend to wander all times of the day and night. The biggest risk factor for Alzheimer's disease is age; the incidence of Alzheimer's disease rises sharply with advancing age, with as many as half the people over 85 exhibiting symptoms. Research has identified two different forms of Alzheimer's disease: an early onset version that occurs before age 60 and a late onset version that occurs after age 60. The earlyonset type is quite rare, representing fewer than 5% of Alzheimer's patients (Bertram&Tanzi, 2005). Early onset Alzheimer's can be traced to a genetic defect and at least three different genes on chromosomes 1,14, and 21 contribute.

A variety of environmental and behavioral factors play a role in the development of Alzheimer's disease, interacting with the genetics of the disease. For example, having a stroke and Type Diabetics also increases the risk for Alzheimer's disease. The process of inflammation is also a risk for Alzheimer's, as it is for cardiovascular diseases. Low educational levels and lack of mentally challenging activities during adulthood also pose a risk. A number of behavioural problems that are symptoms of of psychiatric disorders occur majority of people with

Alzheimer's disease (Weiner, Hynan, Bret, & White, 2005). Common behavioral symptoms are agitation and irritability, sleep difficulties, delusions such as suspiciousness and paranoia, inappropriate sexual behavior, and hallucinations. These behavioral symptoms can be the source of much distress to patients as well as the care giver. Treatment is mainly focused toward slowing the progress of the disease, managing thenegative symptoms and helping family care givers cope with the stress. Drug treatments intendedto slow the progress of the disease have limited effectiveness, but help some people.Management of symptoms can include providing sensory and cognitive stimulation to slow cognitive loss and changing the environment to make care less difficult. As with other chronic illness, Alzheimer's disease affects not only patients but also family members, whom bear the burden of care giving. Some of the distressing symptoms can make care giving difficult. Studies found that Alzheimer's caregivers experience poorer physical and psychological health and poorer immunological function than people with similar age who are not caregivers. Training and support are also desire for those who provide care for Alzheimer's patients, because caregivers are burdened by the demands of caring for someone with these disease.

Dementia

Dementia is the loss of mental functions such as thinking, memory, and reasoning that is severe enough to interfere with a person's daily functioning. Dementia is not a disease itself, but rather a group of symptoms that are caused by various diseases or conditions. Symptoms can also include changes in personality, mood, and behavior. Dementia develops when the parts of the brain that are involved with learning, memory, decision-making, and

language are affected by one or more of a variety of infections or diseases. The mostcommon cause of dementia is Alzheimer's disease, but there are as many as 50 other known causes. Most of these causes are very rare.

Causes

The most common causes of dementia include: a) Degenerative neurological diseases, including Alzheimer's disease, Parkinson's disease, Huntington's disease (a rare inherited disorder), and some types of multiple sclerosis. b) Vascular disorders, such as multi-infarct dementia, which is caused by multiple strokes in the brain. C) Traumatic brain injury caused by motor vehicle accidents, falls, etc. d) Infections of the central nervous system such as meningitis, HIV, and Creutzfeldt-Jakob disease, a quickly progressing and fatal disease that is characterized by dementia and muscle twitching and spasm. e) Chronic alcohol or drug use. f) Depression . g) Certain types of hydrocephalus, an excess accumulation of fluid in the brain that can result from developmental abnormalities, infections, injury, or brain tumors

Types of Dementia

Dementia can be split into two broad categories based on which part of the brain isaffected. They are 1) Cortical dementias 2) Sub cortical dementia 3) Multi-infarct dementia

1) Cortical dementias: arise from a disorder affecting the cerebral cortex, the outer layers of thebrain that play a critical role in thinking abilities like memory and language. Alzheimer's andCreutzfeldt-Jakob disease are two forms of cortical dementia. People with cortical dementiatypically show severe memory loss and aphasia (the inability to recall words and understandlanguage)
2) Sub cortical dementias: result from dysfunction in the parts of the brain that are beneath thecortex. Usually, the forgetfulness and language difficulties that are characteristic of corticaldementias are not present. Rather, people with subcortical dementias, such as Parkinson'sdisease, Huntington's disease, and AIDS dementia complex, tend to show changes in their speedof thinking and ability to initiate activities.
3) Multi-infarct dementia: There are cases of dementia where both parts of the brain tend to beaffected, such as multi-infarct dementia.

PSYCHOSOCIAL INTERVENTIONS FOR PEOPLE WITH CHRONIC CONDITIONS

Before people actually experience specific chronic illnesses in their families, they usually have some ideas about how serious the health problems are. How do they feel about an illness after someone in the family develops it? Is it worse than they expected, or not as bad, or about the same? The answers to these questions should have a bearing on how well the family adjusts to health problems. One study had parents whose children had either diabetes, asthma, epilepsy, or no chronic illness rate how serious each of the three health problems would be if their children were to develop it or had it now (Marteau& Johnston,

1986). The ratings revealed two interesting findings: (1) the lowest ratings of seriousness the parents gave were for the health problems their ownchildren had and (2) parents whose children did not have chronic illnesses rated each of the health problems as being very serious. These findings indicate that parents who live with chronic illnesses in their children tend to have less negative views of the health problems than parents whose children do not have those illnesses. The prospect of a health problem is frightening, but most families adjust fairly well if a child develops a chronic illness (Cadman et al., 1991). But, as we have seen, many people do not adjust well to chronic health conditions. The types of adjustment problems that commonly develop with chronic conditions are outlined in Table 13.4. The problems patients and their families experience depend on many factors, such as how visible, painful, disabling, or life-threatening the illness is. Another factor is the patient's age (O'Dougherty& Brown, 1990). In the early childhood years, victims of chronic illness may become excessively dependent if the parents are overprotective, such as by not allowing an epileptic child to play in a wading pool with careful supervision. In later childhood and adolescence, chronically ill individuals may experience academic and social difficulties that impair their friendships, self-confidence, and self-esteem. Adults who develop a chronic condition may have difficulties if their illness leads them to stop working or change jobs, alter their parenting role, or change or stop their sexual relations. Ideally, interventions to help individuals with chronic health problems involve interdisciplinary teams of professionals—physicians, nurses, psychologists, physical and occupational therapists, vocational counselors, and social workers—working in an integrated manner toward the overall goals of rehabilitation (Bleiberg, Ciulla, & Katz, 1991). Psychologists contribute to this process by advising other team members on psychological and behavioral issues, and helping each client and his or her family to cope with the psychosocial implications of the medical condition andby using psychosocial principles to enhance the person's participation in and adherence to the therapeutic regimen. Involving family members in this process benefits them and the patient, such as in reducing their feelings of depression and of burden from care-giving (Martire et al., 2004). We'll consider many useful psychosocial approaches, most of which can be used either with individuals or in groups and for a variety of illnesses.

Many chronically ill people and their families have difficulty adjusting to the health problem and its medical regimen. They can be helped with psychosocial interventions that involve education, support services, behavioral methods, relaxation and biofeedback, cognitive methods, and interpersonal and family therapy. Self-management programs combine these techniques to help patients adhere to their regimens, adapt to their new roles, and cope with their emotions. Many patients with chronic illness benefit from approaches to medical care that combine multiple professions and perspectives.

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