

**CATHOLIC UNIVERSITY OF RWANDA**



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**SOCIAL AND BEHAVIORAL CHANGE  
IN PUBLIC HEALTH**

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## **COURSE OBJECTIVES:**

At the end of the course, the student will be able to:

1. describe the influence of behavioral, social and psychological factors on health.
2. identify social and psychological factors and processes in etiology of disease and health related behaviors.
3. identify cultural factors that influence public health problems and their solutions.
4. discuss cultural factors relevant to health and illness and apply effective strategies to work in a cross-cultural context and with different groups and populations.
5. describe how social science-based knowledge and tools complement biological and physical science to understand and address public health problems.
6. apply social and behavioral science theories and methods to analyze public health problems in terms of the factors that influence their development and alternative approaches to their resolution.
7. recognize similarities and contrasts in the approaches taken by different social science disciplines in the study of health-related problems.
8. assess the utility of interventions aimed at different system levels, including individual behavior, family systems, community organization, complex social systems, and the social and physical environment.
9. identify situations necessary for counseling and apply the principles of counseling and communication skills.
10. communicate effectively in order to cause positive behaviour change among individuals, groups, and community.
11. apply health communication theories in health programs.
12. apply behavioral science research methods to studying health problems and evaluating interventions.

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## GENERAL INTRODUCTION

There are two main goals for any health services system. The first is to optimize the health of the population by employing the most advanced state of knowledge about the causation of disease, illness management, and health maximization. The second is to minimize the disparities across population subgroups so that certain groups are not at a systematic disadvantage with regards to their access to health services achievement of optimal health.

The Behavioral Sciences are concerned with the study of how human beings think and behave, both as individuals and in social, spiritual and cultural settings. “Behavioral” is a term that covers a lot of grounds. It refers to what people do, as well as what drives them to do things, and it involves psychological processes like emotion. “Social,” on the other hand, reflects how individuals interact with each other: in small groups, families, and communities, as well as within populations and in society.

Social and behavioral sciences are currently needed in the field of health for the following reasons:

- **Social and psychological factors are important determinants of health:**
  - For instance, psychological processes are causes of disease, while changes in one’s way of life have become a crucial factor in the treatment of chronic illnesses.
- **Changes in social and environmental conditions:**
  - Technological changes have produced new public health problems, such as air pollution, radiation, and food additives. The peaceful use of nuclear energy poses a real public health hazard. The automobile becomes an ever-increasing agent of death and disability.
  - Stress of modern living and breakdown of social supports such as the family have increased the importance of mental illness as a public health problem. Alcoholism and drug abuse are also reflections of this trend.
- **Changes in medical care practices and organizations:**
  - Problems in integration of medical services and in continuity of care
  - The high cost of medical care has led to rapid expansion of health insurance and increased pressure for some form of government-sponsored insurance plan.
  - Shortages in medical and nursing personnel have created serious problems of providing adequate care and have encouraged the development of quasi-medical personnel such as nurses’ aides, dental assistants and community health workers.

- **Changes in Public health practices:**
  - Prevention of illness is becoming more a matter of changing the habits and customs of individuals than controlling environmental conditions or immunizing populations. New methods of health education are needed to produce such changes in the behavior of individuals and customary practices of groups. Cultural differences among subgroups of the population require special attention.
  - The emphasis of public health upon legislation is giving way to a greater reliance upon voluntary participation.
  - The public must be motivated to make use of health services.
- **Changes in public opinion and behavior:**
  - Health and happiness are being demanded by the public as a basic right rather than a privilege. Medical care has become a necessity of life and an essential part of any welfare program.
  - The public is taking more active part in the determination of public health policy.
  - The public is showing a greater interest in medical matters

These trends constitute real challenges to traditional forms of public health activities, so that the intervention of social and behavioral specialists is needed either for research, teaching, or service.

The course of “Social and Behavioral Sciences Applied to Public Health” will provide students with the knowledge and skills needed to understand individual, community, and organizational behaviors and change processes in cross-cultural, international and/or domestic settings as a foundation for planning appropriate health promotion, disease prevention, health education and primary health care programs. Students will learn to outline the contribution of social and behavioral science theories in planning and implementation of culturally relevant health programs; will utilize social and behavioral theories to understand individual, social network, organizational, community, and policy maker health related behaviors; and identify the factors that promote and inhibit community involvement in health program development and implementation.

## CHAPTER ONE: INTRODUCTION TO SOCIAL AND BEHAVIORAL SCIENCES

### 1.1. Definition of social and behavioral sciences

The term "**behavior**" is used to express the observable responses, actions, or activities of someone. It refers to overt actions; to underlying psychological processes such as cognition, emotion, temperament, and motivation; and to biobehavioral interactions. On the other hand, the term "**social**" encompasses sociocultural, socioeconomic, and sociodemographic status. It refers to biosocial interactions; and to the various levels of social context from small groups to complex cultural systems and societal influences.

Many definitions are given to the concept "**social science**". Any discipline or branch of science that deals with the sociocultural aspects of human behavior is considered as a social science. The Medical dictionary defines social science as a branch of science that deals with the institutions and functioning of human society and with the interpersonal relationships of individuals as members of society. Generally, social sciences include anthropology, economics, political science, psychology and sociology. In a wider sense, it may often include some fields in the humanities such as archaeology, history, law, and linguistics.

"**Behavioral sciences**" is the collective term given to a number of disciplines which focus on the study of the behavior of humans. It is the systematic analysis and investigation of human and animal behavior through controlled and naturalistic observation. It attempts to accomplish legitimate, objective conclusions through rigorous formulations and observation. The Medical dictionary defines behavioral science as a science that deals with human action and seeks to generalize about human behavior in society. Scientific disciplines, such as sociology, anthropology, or psychology, in which the actions and reactions of humans and animals are studied through observational and experimental methods are included in behavioral sciences.

The disciplines which contribute to an understanding of human behavior are generally listed as follows:

- Psychology: defined as the science that seeks to measure, explain, and sometimes change the behavior of humans and other animals. Psychologists primarily attempt to understand the behavior of individuals. By that we mean that the level of analysis is the individual person (not a group). Psychology gives us insight into how an individual learns, is motivated, perceives, develops personality, deals with conflict, acquires attitudes, etc.

- **Sociology:** defined as the study of people in relation to their fellow human beings. Sociologists have provided great insight into the collective behavior of people in groups. For example, this discipline has shown us the influence of power positions within groups; how conflict arises and is resolved within groups; the influence of culture and so forth. The level of analysis is the group.
- **Politics:** defined as the study of behavior of individuals and groups within a political environment. Specific topics studied by political scientists have implication for understanding the behavior of individuals and groups within organizations, for example, the manipulation of power for individual or group self interests. This manipulation will be evident in the culture of the group or organization.
- **Economics:** defined as the study of processes by which scarce resources are allocated to satisfy unlimited wants. The main topics of study are those of production, exchange, and consumption of goods and services. ‘Work’ can be viewed as an economic activity in that, in exchange for labor, individuals receive necessary income with which to support themselves and their families. The level of income is a function of several factors such as education, ambition, social class among others. The level of income has an implication for behavior and life-style.
- **History:** defined as ‘the study of past events’, so that we might learn from past successes and failures. We all use our past experiences to help us interpret the present. We study history to do the same but on a larger scale. We attempt to extol historical figures who have made major contributions to helping us understand ourselves. Through looking into ‘history’ we can recognize patterns of behavior which might not be obvious to us in present situations.
- **Law:** It is easy to see how the law affects our behavior. For example, ‘employment laws’ and the constraints they impose on behavior in the work-place have clear implications for the way people are managed. Therefore, they influence the behavior of employers, managers and employees.
- **Philosophy:** Philosophy can be used to refer to a body of knowledge which is studied in universities, but in a broader sense it can be used to refer to ‘a philosophy of life’ underpinning whole civilizations. For example, a Christian philosophy underpins all western societies in that social norms (e.g. Monogamy) tend to reflect Christianity. That may be changing slowly and may be replaced by a more secular philosophy. In eastern societies the way of life tends to be underpinned by non-christian beliefs, for example, Hinduism, or Buddhism, or Islam, or Judaism or Taoism ...
- **Art and Music:** they have also a history behind them. We see them reflecting a particular culture, or society or historical period. We also know that music in particular, can have a major influence

on the behavior of whole groups of people and individuals. This influence may be ‘age’ related, or ‘social class’ related, or ‘religion’ related and so forth.

- **Religion:** Every major civilization is underpinned by a religion. For example, in China and Japan one find that Taoism and Buddhism have a major influence on the day-to-day life of people. In India, the influence is largely through Hinduism and Islam. In the West, institutions such as Law, and Marriage, reflect a Christian influence. Older civilizations, such as the native American Indians also had a system of beliefs which was reflected in their lives, and so on. Several psychologists have drawn attention to the need that humans appear to have for transcendent ‘needs’, that is, as humans even when our physical and emotional needs appear to be satisfied we quite often ‘want’ more, and we seek it in religion or spirituality.

Perhaps one could add other disciplines to this list.

## **1.2. Historical background of social and behavioral sciences**

The intimate relationship between the mind and the body, the nature of thoughts, the role of experience in behavior has been asked for thousands of years.

The origins of the scientific study of animal and human behavior lie in the works of various European thinkers of the 17th to 19th centuries, such as British naturalists John Ray and Charles Darwin and French naturalist Charles LeRoy. These individuals appreciated the complexity and apparent purposefulness of the actions of animals, and they knew that understanding behavior demands long-term observations of animals in their natural settings. At first, the principal attraction of natural history studies was to confirm the ingenuity of God. The publication of Darwin’s *On the Origin of Species* in 1859 changed this attitude. In his chapter on instinct, Darwin was concerned with whether behavioral traits, like anatomical ones, can evolve as a result of natural selection. Since then, biologists have recognized that the behaviors of animals, like their anatomical structures, are adaptation that exist because they have, over evolutionary time (that is, throughout the formation of new species and the evolution of their special characteristics), helped their bearers to survive and reproduce.

Furthermore, humans have long appreciated how beautifully and intricately the behaviors of animals are adapted to their surroundings. For example, young birds that possess camouflaged color patterns for protection against predators will freeze when the parent spots a predator and calls the alarm. Darwin’s achievement was to explain how such wondrously adapted creatures could arise from a process other than special creation.

The natural history approach of Darwin and his predecessors gradually evolved into the twin sciences of animal: **Ecology**, the study of the interactions between an animal and its environment, and **Ethology**, the biological study of animal behavior. The roots of Ethology can be traced to the late 19th and early 20th centuries, when scientists from several countries began exploring the behaviors of selected vertebrate species: dogs by the Russian physiologist Ivan Pavlov; rodents by American psychologists John B. Watson, Edward Tolman, and Karl Lashley; birds by American psychologist B. F. Skinner; and primates by German American psychologist Wolfgang Köhler and American psychologist Robert Yerkes. The studies were carried out in laboratories, in the case of dogs, rodents and pigeons, or in artificial colonies and laboratories, in the case of primates. These studies were oriented toward psychological and physiological questions rather than ecological or evolutionary ones.

Since the 1960s, interest in human behavior has grown enormously in the industrialized countries. In broad social terms, the importance of so-called behavioral and social sciences has been recognized. As result, more and more psychologists, sociologists, welfare and social workers have been employed in the health and welfare sectors.

### **1.3. Main social and behavioral sciences applied to Public health**

#### **1.3.1. Psychology**

##### **1.3.1.1. Introduction**

Psychology is defined as the scientific study of the human mind and its functions, especially those affecting behavior in a given context. It is the scientific study of behavior, both external observable action and internal thought. As a study of behavior and mental processes, Psychology is a set of procedures for systematically observing facts about behavior and organizing them into testable generalizations about why people think, feel, and act as they do. The goals of psychology involve describing, predicting, and explaining behavior. Psychology has much to offer health professionals in their understanding of, and dealing with people.

For many people, “Psychology” is synonymous with “Psychotherapy”. To them, a psychologist is someone who interprets a client’s dreams, decoding the hidden meaning in the symbols. According to this view, a psychologist offers suggestions for how to change behavior and how to overcome the emotional problems. But really, not all psychologists perform therapy. However, Psychotherapy which is has the main goal of changing behavior or treatment of mental disorder has mainly its roots in psychological theories.

### **1.3.1.2. Movements/schools/Approaches in Psychology**

Five perspectives have come to dominate psychology in the twentieth century: psychoanalytic psychology, behaviorism, humanistic psychology, cognitive psychology, and neuroscience.

Each psychological movement or school has its own point of view from which it addresses the study of reality. Each psychological movement also has its own research methods and methodology of treatment.

#### **a) The neurobiological approach**

The neurobiological approach is based on the assumption that processes in the brain and nervous system have an important impact upon human behavior.

According to neurobiological approach, there is a close relationship between a specific location in the brain and a form of behavior. A variety of methods has been developed for testing this relationship.

- Studying the evolution of the brain
- Studying illness or brain damage
- Studying brain degeneration
- Studying by stimulation
- Studying the electrical activity of nerves.

#### **b) The behavioral approach**

The behavioral approach attaches greater importance to the influences from the surrounding environment. Practitioners of this approach are primarily occupied with behavior. The behavior can be seen, heard, felt or detected.

The second characteristic of practitioners of this approach is that they believe that internal processes play a secondary role in the generation and continuation of behavior. Behavior is felt to be influenced in the first place by factors which precede that behavior. Secondary, behavior is said to be influenced by factors which follow it.

The third characteristic of this approach is that almost all forms of behavior are learned. The fourth characteristic of the behavioral approach is the heavy emphasis which is placed upon scientific research. Behavior has to be measured.

The roots of behaviorism can be found in the ancient Greek philosophy known as associonism. However, Edward Thorndike (1874-1949) is considered as the founder of behaviorism, the study of observable behavior without reference to mental processes. Watson, Skinner and Pavlov are the main promoters of behavioral approach.

Pavlov's work, which first became known in the United States during the 1920s and 1930s, influenced an American psychologist, B.F Skinner. Skinner believed that all human behavior could be understood by studying the relationships between stimulus and response, a position known as radical behaviorism. Classical conditioning (Pavlov) and operant conditioning (Skinner) are two important concepts central to behavioral psychology.

#### **c) The cognitive approach**

The cognitive approach is geared primarily towards the manner in which people solve problems. The practitioners of this approach are interested in the structures and processes of thought. The main assumption of the cognitive approach is that information received from our senses is processed by the brain and that this processing directs how we behave or at least justifies how we behave the way that we do. The cognitive approach began to revolutionize psychology in the late 1950's and early 1960's, to become the dominant approach in psychology by the late 1970s. Interest in mental processes had been gradually restored through the work of Piaget and Tolman. Other factors were important in the early development of the cognitive approach. For example, dissatisfaction with the behaviorist approach in its simple emphasis on behavior rather than internal processes and the development of better experimental methods.

#### **d) The Psychoanalytical approach**

The founder of the psychoanalytical approach is Sigmund Freud (1856-1939). Freud and the school which he founded have had an enormous influence upon the development of psychology in its totality. According to S. Freud, individual personality is made up of 3 important systems: "id", "ego" and the "superego".

- The id represents the human being's basic needs. It is the first part, the original form of the personality. It seeks to avoid pain and to obtain pleasure.

- The ego represents the conscious attempt to balance the innate pleasure-seeking drives of the human organism and the demands of society. The ego has the role of keeping an eye on reality. The function of the ego is to express the wishes of the id in a manner which corresponds with reality. It mediates between the needs of the id and the requirements of superego.
- The superego is the presence of culture within the individual. The superego arises as we begin to view the standards and values of our parents or our social environment as our own. It develops in response to the rewards and punishments of the parents and other educators. It is responsible for controlling behaviors in accordance with social rules.

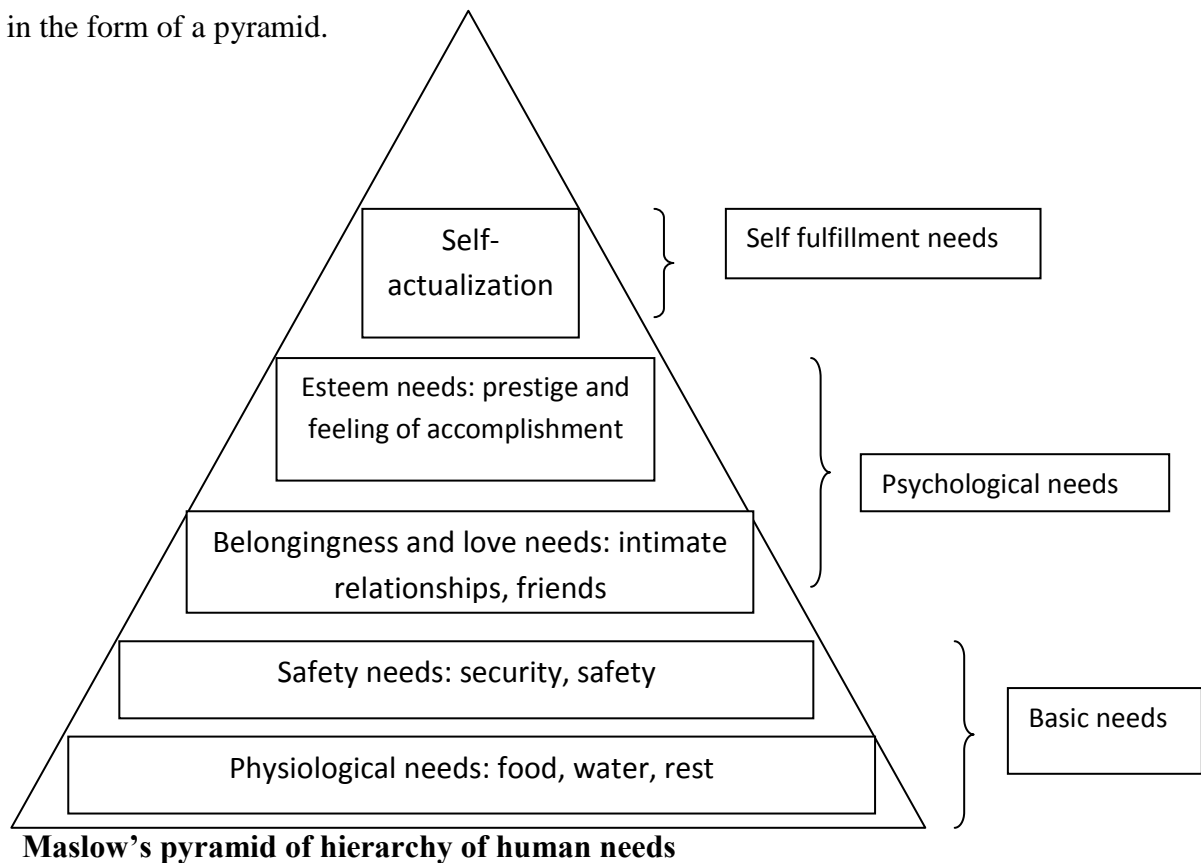
Freud is of the opinion that the first five years of a person's life are extremely important for development of human personality. During these first five years, we go through a number of stages called "psychosexual stages": Oral stage (Birth to 18 months), Anal stage (18 months to 3 years), Genital stage (3-6 years), Latency period (6-13 years) and Puberty (13 years and more). The way in which these stages are completed is important to the manner in which the personality goes on to function during adulthood.

Sigmund Freud believed that behavior and personality derives from the constant and unique interaction of conflicting psychological forces that operate at three different levels of awareness: the conscious, the subconscious, and the unconscious.

#### **e) The humanistic (phenomenological) approach**

The adherents of the humanistic approach feel that it is the subjective experiences of the individual which are most important. According to psychologists of humanistic orientation, what is really important is the personal view of the world and interpretation of events (the individual's phenomenology), his life in the here and now.

The two leading representatives of this school are Carl Rogers and Abraham Maslow. For Carl Rogers, the most important think for a person is his perception of his own world, not the unconscious impulses which gave rise to this, nor the social circumstances which led to certain behavior through conditioning processes. The individual can direct his own destiny and is responsible for the way in which he lives his life. “Self-actualization” and “Self-image” are key concepts of Carl Rogers’ theories. Abraham Maslow is particularly well known for his presentation of hierarchy of human needs in the form of a pyramid.



While Psychology is very useful in many careers, it has also practical value as a perspective on human behavior. It can help to answer many questions people ask about themselves and others. At the same time, it can help people to be more perspective in evaluating psychological information they read and hear about. About various movements in psychology, it is better to view these approaches as complementary rather than opposing viewpoints. Each can provide valuable insights or offer an explanation at a different level.

#### 1.3.1.4. Health psychology

Health psychology is the most recent development in the process of including psychology into an understanding of health. It was described by Matarazzo as the aggregate of the specific educational, scientific and professional contribution of the discipline of psychology to the promotion and

maintenance of health, the promotion and treatment of illness and related dysfunction. (Matarazzo 1980: 815). Health psychology challenges the mind–body split by suggesting a role for the mind in both the cause and treatment of illness but differs from psychosomatic medicine, behavioral health and behavioral medicine in that research within health psychology is more specific to the discipline of psychology. Health psychology can be understood in terms of its answers to the following questions:

■ What causes illness?

Health psychology suggests that human beings should be seen as complex systems and that illness is caused by a multitude of factors and not by a single causal factor. Health psychology therefore attempts to move away from a simple linear model of health and claims that illness can be caused by a combination of biological (e.g. a virus), psychological (e.g. behaviors, beliefs) and social (e.g. employment) factors. This approach reflects the biopsychosocial model of health and illness, which was developed by Engel (1977, 1980). The biopsychosocial model represented an attempt to integrate the psychological (the ‘psycho’) and the environmental (the ‘social’) into the traditional biomedical (the ‘bio’) model of health as follows:

- (1) The bio contributing factors included genetics, viruses, bacteria and structural defects.
- (2) The psycho aspects of health and illness were described in terms of cognitions (e.g. expectations of health), emotions (e.g. fear of treatment), and behaviors (e.g. smoking, diet, exercise or alcohol consumption).
- (3) The social aspects of health were described in terms of social norms of behavior (e.g. the social norm of smoking or not smoking), pressures to change behavior (e.g. peer group expectations, parental pressure), social values on health (e.g. whether health was regarded as a good or a bad thing), social class and ethnicity.

■ Who is responsible for illness?

Because illness is regarded as a result of a combination of factors, the individual is no longer simply seen as a passive victim. For example, the recognition of a role for behavior in the cause of illness means that the individual may be held responsible for their health and illness.

- How should illness be treated?

According to health psychology, the whole person should be treated, not just the physical changes that have taken place. This can take the form of behavior change, encouraging changes in beliefs and coping strategies and compliance with medical recommendations.

- Who is responsible for treatment?

Because the whole person is treated, not just their physical illness, the patient is therefore in part responsible for their treatment. This may take the form of responsibility to take medication, responsibility to change beliefs and behavior. They are not seen as a victim.

- What is the relationship between health and illness?

From this perspective, health and illness are not qualitatively different, but exist on a continuum. Rather than being either healthy or ill, individuals progress along this continuum from healthiness to illness and back again.

- What is the relationship between the mind and body?

The twentieth century has seen a challenge to the traditional separation of mind and body suggested by a dualistic model of health and illness, with an increasing focus on an interaction between the mind and the body. This shift in perspective is reflected in the development of a holistic or a whole person approach to health. Health psychology therefore maintains that the mind and body interact. However, although this represents a departure from the traditional medical perspective, in that these two entities are seen as influencing each other, they are still categorized as separate. The existence of two different terms (the mind/the body) suggests a degree of separation and ‘interaction’ can only occur between distinct structures.

- What is the role of psychology in health and illness?

Health psychology regards psychological factors not only as possible consequences of illness but as contributing to its etiology. Health Psychologists considers both a direct and indirect association between psychology and health. The direct pathway is reflected in the physiological literature and is illustrated by research exploring the impact of stress on illnesses such as coronary heart disease and cancer. From this perspective the way a person experiences their life (‘I am feeling stressed’) has a direct impact upon their body which can change their health status. The indirect pathway is reflected more in the behavioral literature and is illustrated by research exploring smoking, diet, exercise and

sexual behavior. From this perspective, the ways a person thinks ('I am feeling stressed') influences their behavior ('I will have a cigarette') which in turn can impact upon their health.

Health psychology emphasizes the role of psychological factors in the cause, progression and consequences of health and illness. **The aims of health psychology can be divided into:**

(1) understanding, explaining, developing and testing theory and

(2) putting this theory into practice.

❖ Health psychology aims to understand, explain, develop and test theory by:

(a) Evaluating the role of behavior in the etiology of illness. For example:

■ Coronary heart disease is related to behaviors such as smoking, food intake, lack of exercise.

■ Many cancers are related to behaviors such as diet, smoking, alcohol and failure to attend for screening or health check-ups.

■ A stroke is related to smoking, cholesterol and high blood pressure.

■ An often overlooked cause of death is accidents. These may be related to alcohol consumption, drugs and careless driving.

(b) Predicting unhealthy behaviors. For example:

■ Smoking, alcohol consumption and high fat diets are related to beliefs.

■ Beliefs about health and illness can be used to predict behavior.

(c) Evaluating the interaction between psychology and physiology. For example:

■ The experience of stress relates to appraisal, coping and social support.

■ Stress leads to physiological changes which can trigger or exacerbate illness.

■ Pain perception can be exacerbated by anxiety and reduced by distraction.

(d) Understanding the role of psychology in the experience of illness. For example:

■ Understanding the psychological consequences of illness could help to alleviate symptoms such as pain, nausea and vomiting.

■ Understanding the psychological consequences of illness could help alleviate psychological symptoms such as anxiety and depression.

(e) Evaluating the role of psychology in the treatment of illness. For example:

■ If psychological factors are important in the cause of illness they may also have a role in its treatment.

■ Changing behavior and reducing stress could reduce the chances of a further heart attack.

■ Treatment of the psychological consequences of illness may have an impact on longevity.

❖ Health psychology also aims to put theory into practice. This can be implemented by:

(a) Promoting healthy behavior. For example:

- Understanding the role of behavior in illness can allow unhealthy behaviors to be targeted.
- Understanding the beliefs that predict behaviors can allow these beliefs to be targeted.
- Understanding beliefs can help these beliefs to be changed.

(b) Preventing illness. For example:

- Changing beliefs and behavior could prevent illness onset.
- Modifying stress could reduce the risk of a heart attack.
- Behavioral interventions during illness (e.g. stopping smoking after a heart attack) may prevent further illness.
- Training health professionals to improve their communication skills and to carry out interventions may help to prevent illness.

### **1.3.2. Social psychology and Sociology**

#### **1.3.2.1. Introduction**

If you compare the definitions of Social Psychology and Sociology, the definitions show that the two branches of knowledge have major similarities. Whether you are considering the way in which individuals are influenced by their environment (Social Psychology), or the way in which they themselves form the social environment (Sociology), you will come across a large number of identical concepts. It is frequently impossible to differentiate between Social Psychology and Sociology, particularly Microsociology.

**Social Psychology** is defined as the scientific study of the way in which people's thoughts, feelings, and behaviors are influenced by the real or imagined presence of other people.

**Sociology** is a branch of knowledge which studies the structures of people living in groups and the processes involved. Since the area studied by Sociology is so vast, a distinction is often made between macrosociology and microsociology. The former is concerned with the major structures and processes such as society as a whole or the concept of culture. Microsociology is directed more towards smaller processes and structures, and how people experience their social world.

#### **1.3.2.2. The concept of relationship and interaction**

People interact with others and with their environment and influence one another. Living in community is essential to human beings. Living in a community means starting relationships. We talk about relationship when referring to any connection with another person or persons. Much of what we do, think or feel is determined by the relationships we form, since there is interaction within

the various relationships. The concepts of relationship and interaction are therefore closely linked. The term “relationship” refers to the contacts that people have. The term “interaction” refers to the process that takes place within such contacts. Interaction is the process of mutual influence within relationship.

**Each relationship has something unique and can be studied on the basis of each of the following criteria:** Purpose, form, the way in which the relationship is maintained, depth, the extend to which the relationship is voluntary and emotional content.

**The interaction process is affected by various factors:**

- Individual factors: biological, personality characteristics, social needs, thoughts and emotions of the moment.
- Environmental factors
- Situational factors

#### **1.3.2.3. The group and leadership**

The group is defined as a collection of two or more people who interact with each other and are interdependent, in the sense that their needs and goals cause them to rely on one another. Thus, groups are more than a bunch of people who happen to be occupying the same space. Rather, groups are people who have assembled together for a common purpose. Groups have well-defined social roles, shared expectations about how people are supposed to behave. The roles that people assume in the groups, and the expectations that come with those roles, are powerful determinants of people’s feelings and behaviors in groups.

Leaders usually play crucial roles in group decisions. Leadership effectiveness is a function of both the kind of person a leader is and the nature of the situation. Decision-making style distinguish leaders from one another: Authoritarian leaders, Democratic leaders and Laissez-faire leaders.

#### **1.3.2.4. Society, culture, and socialization**

The concept **society** refers to people who interact with one another within a limited territory and who share the culture. The society can not exist without culture.

The **culture** is defined as the beliefs, values, behavior, and material objects shared by a particular people. Sociologists distinguish between nonmaterial culture and material culture. The nonmaterial culture refers to the intangible creations of human society; instead material culture refers to tangible products of human society. Culture is a way of life or social heritage that certain people have in

common. Although cultures vary greatly, they all have five components in common: symbols, language, values, norms, and materials culture.

- **A symbol** is anything that carries a particular meaning recognized by members of a culture.
- **Language** is a system of symbols with a standard meaning that allows members of a society to communicate with one another. All cultures have a spoken language. Language is the most important means of cultural transmission, the process by which culture is passed from one generation to the next.
- **Values** are standards by which members of culture define what is desirable or undesirable, good or bad, beautiful or ugly. Our personalities develop in relation to the values of our culture, usually without our being aware that this is so. We learn from our families, schools, and religious institutions how to think and act according to cultural standards of values, what personal goals are defined as worthy, and how to relate properly to our fellow human beings. Within any society, the values people hold are likely to vary according to age, sex, ethnicity, religion, race, and social class.
- **Norms** are rules that guide behavior. Many norms are proscriptive, mandating what we must not do. Others are prescriptive, stating what we must do. Proscriptive norms that have great moral significance are often termed “taboos”.
- **Material culture and technology**: in addition to intangible cultural elements such as values and norms, every culture includes a wide range of tangible human creations that sociologists refer to as artifacts. Material culture reflects also technology, which is the application of cultural knowledge to the task of living in a physical environment. Technology links the world of nature and the world of culture.

Unlike other spaces of life for which behavior is determined biologically, human beings depend on culture gained from social experience. **Socialization** is the lifelong process of social experience by which individuals develop their human potential and learn the patterns of their culture. Moreover, social experience is the foundation of personality, which refers to a person’s fairly consistent pattern of thinking, feeling and acting. Personality is constructed from our social surroundings and how we learn to respond to them. As personality develops, we become distinctive individuals and gain the ability to share in a culture. The family, schooling, peer groups, mass media, and public opinion are the main agents of socialization.

### 1.3.2.5. Attitudes, conformity and social influence

People are not neutral observers of the world, but the constant evaluators of what they see. **An attitude** is defined as a person's enduring evaluation of a person, object, or idea. Attitudes are made up of different components, or parts. Specifically, attitudes are made up of an **affective component** consisting of emotional reactions toward the attitude object, a **cognitive component** consisting of thoughts and beliefs about the attitude object and a **behavioral component** consisting of actions or observable behavior toward the attitude object.

Social psychologists have focused on the way that attitudes are created by people's cognitive, affective, and behavioral experiences. Whereas attitudes have affective, cognitive, and behavioral components, any given attitude can be based more on one type of experience than another. Then, they differentiate cognitively based attitudes, affectively based attitudes and behaviorally based attitudes. Sometimes, attitudes predict behavior.

**Conformity** can be defined as a change in behavior due to the real or imagined influence of other people. There are two main reasons people conform: informational and normative social influences. Informational social influence occurs when people do not know the correct (or best) thing to do or say. This reaction typically occurs in ambiguous, confusing, or crisis situations, where the definition of the situation is unclear. People look to the behavior of others as an important source of information and use it to choose appropriate courses of action for themselves. Contagion occurs when emotions and behaviors spread rapidly through a group. Normative social influence occurs because we want to remain a member of the group, continue to gain the advantages of group membership, and avoid the pain of ridicule and rejection.

### 1.3.2.6. Sex and gender

Currently, women have made important progress but are still socially disadvantaged. The inequality is often thought to reflect innate differences between the sexes, but it is actually a creation of society itself. Gender which is "human traits linked by culture to each sex" plays a major part in the socialization process. For all classes, ethnicity, and races, cultural definitions of masculinity affect the behavior of males and females. Gender includes all culturally learned differences between males and females, including how people think about themselves, how they interact with others, and what positions they occupy in society as a whole. Gender varies historically and across cultures.

### 1.3.3. **Anthropology**

#### 1.3.3.1. **Introduction: culture and health**

Cultural factors are central issues in the health problems that confront the world today. Culture and health interactions are involved in cardiovascular deaths due to lifestyles, in the epidemic spreading around the globe, in deaths due to pesticides, infant diarrhea and dehydration, cigarette smoking, and side effects of drugs. Cultural factors are central to health issues of obesity, accidents, problems of the homeless and medically uninsured, child sexual abuse, and drug addiction. Social, economic, and cultural factors underlie major international health problems, including the spread of the acquired immunodeficiency syndrome (AIDS) epidemic, infant mortality due to preventable disease, the prohibitive cost of pharmaceuticals, diseases from environmental contamination, and social pathologies such as mental illness and violent assaults.

#### 1.3.3.2. **Definition of Anthropology**

The term “anthropology” has been derived from two terms: “anthropos” meaning man and “logos” meaning knowledge. Thus, anthropology is the knowledge of man. It is by definition the study of man. According to Jacobs and Stern, Anthropology is the scientific study of the physical, social and cultural development and behavior of human beings since their appearance on this earth.

#### 1.3.3.3. **Scope of Anthropology**

##### **A) Physical anthropology**

Physical anthropology studies human body, genetics and the status of man among living beings. Physical anthropology is the study of bodily appearance of man. It has now been divided into five branches according to the specialization of study: Human genetics, Human paleontology, Ethnology, Anthropometry and Biometry.

##### **B) Cultural anthropology**

Cultural anthropology studies human cultures. It studies human customs, mores, traditions, social life, religion, art, science, literature, economic and political organization. In the words of Beals and Hoizer, “Cultural anthropology studies the origins and history of man’s culture, their evolution and development, and the structure and functioning of human culture in every place and time”. Cultural anthropology has been divided into 2 classes:

- Prehistoric archeology: archeology or prehistory deals primarily with ancient cultures and with past phases of modern civilization. It attempts to reconstruct the cultural forms of the past and to trace their growth and development to Anthropology.
- Social Anthropology: Social anthropology studies social organization and social institutions. “Social anthropology” is the study of social behavior, especially from the point of view of the systematic comparative study of social forms and institutions” (Charles Winick, ....)

Physical anthropology and Cultural anthropology are closely related.

#### 1.3.3.4. **Anthropological methods**

The main methods of Anthropology are:

- A) Method of participant observation
- B) Historical method
- C) Comparative method
- D) Functional method

#### 1.3.3.5. **Anthropology and sociology**

Sociology studies human behavior in groups: it is a science of societies, while Anthropology is a science of man and studies human behavior in social surroundings. Thus, it is clear that the subject matter of Sociology and Anthropology is common to a great extent. The main differences between these two sciences are the following:

- Difference in scope: social anthropology studies primitive society whereas Sociology studies modern society. Social anthropology studies all the social, economic, political and cultural sides. Sociology studies the social relations and social interactions. In this way, the study of Sociology is more particular and that of anthropology more genera.
- Difference of object: a sociologist suggests means for improvement along with his study, whereas an anthropologist is more neutral and does not offer any suggestion.
- Difference in methods of study: social anthropologist specially uses applied methods. One of this kind is participant observation according to which, the anthropologist himself goes to live in that

society which he has to study. On the other hand, the chief methods of sociology depend on survey and statistics.

- Difference in viewpoint: one is particular and the other is general. One is the view point of a specialist and the other view point is that of a scientist. One is actuated by a desire to improve and the other is neutral.

Sociology and Social Anthropology and their decisions can be of important help for human well-being. They can help in understanding and solving social, economic, political and health problems. For example, anthropological study will be of great help in finding out means for the welfare and health promotion of different tribes and primitive societies.

#### 1.3.4. Political sciences

##### 1.3.4.1. Introduction

Political Science is the modern discipline for the study of politics and political processes and the organization of the state. Since Aristotle, many political philosophers have sought to understand and explain how politics works and think about how societies should be governed. Political science has evolved from the early description of institutions at the end of the nineteenth century, to a focus in the mid-twentieth century on political behavior, to the modern study of the relationship between actors, institutions and political outcomes. Two prominent theoretical approaches in political science are rational choice theory, which emphasizes the strategic utility-maximizing behavior of political actors; and institutional theory, which emphasizes the power and path-dependency of formal and informal political institutions.

**Political behavior** refers to the beliefs and actions of political actors: citizens, voters, party leaders, members of parliaments, government ministers, judges, civil servants, and members of interest groups. These actors have ‘political preferences’: their political interests, values and goals. For example, some citizens would like the government to spend more money on education and healthcare while others would like the government to reduce taxes.

Political behavior takes place within a set of **political institutions**. ‘Institutions’ means any formal or informal rule which constrains the behavior of actors (Compare North, 1990). Formal institutions include the various provisions in a constitution, the rules of procedure in a parliament, an electoral system, campaign finance regulations, rules governing how a party chooses its leader, and so on. Informal institutions, meanwhile, encompass social structures (such as class), social norms and cultural practices, metaphysical beliefs and ideological values, and so on. What formal and informal ‘institutions’ have in common is that they restrict actors’ behavior in political situations, and so shape

political actions and political outcomes. One set of influential formal institutions is the rules in the policy-making process governing how many actors can block a proposal: the number of ‘veto players’ (Compare Tsebelis, 2002).

#### 1.3.4.2. **State, nation and society**

Generally, the terms State and Nation are sometimes used interchangeably. However, they may or may not be synonymous.

The word nation has two distinct meanings:

- a. It may mean a political unit i.e. a State
- b. It may mean an ethnological unit, e.g. a Race

A nation in a political sense is what Ernest Baker defines as juridical organized unit or a unit organized for action under legal rule. It is sovereign state having a definite territory, a population, a government, formal independence and a sense of national identity made possible by a combination of both subjective and objective factors. A nation in ethnological sense is commonly defined as a group of people who form a distinctive community by inhabiting a definite territory and recognizing themselves as possessing relatively homogenous set of cultural traits. Those cultural traits include a common or related blood, a common language, a common religion, a common historical tradition and common customs and habits.

For analytical purpose, the State and Society must be distinguished. The state exists within society but it is not even the form of society. While the state is the nation legally organized and assuming the aspect of a single legal association, society is the nation socially organized and assuming the aspect of plurality of associations. Societies thus, suggest many social relationships which cannot be expressed through the state. It consists of the complex network of groups and institutions expressing human association. The state is one of the groups in society. But it is unique because it is the most important group. Although this group may set the keynote of the social order, it is not identical with society. The state provides the framework of the social order and it holds society together. There are many groups or associations in society, e.g. the family, the church or the club which do influence social life but owe neither their origin nor their inspiration to the state. Again there are established institutions or social forms like custom, initiation, competition, marriage, inheritance, which the state may protect or modify but certainly does not create. The state is a way of regulating human conduct in society. Its end is a system of control and order. The state is society in its political aspect. In personal composition the state and society are one because they both include the same body of persons. In

purposes, however, they are different. The state exists for one great but single legal purpose which is the making and enforcing of a permanent system of law and order. To equate state with society would justify state interference in all aspect of the life of individual and consequently may breed tyranny of state control. The primary characteristics of the state are People, Territory, Government and Sovereignty.

#### **1.3.4.5. Power and authority**

Power is the ability or capacity to modify the behavior of a person either at the threat of deprivation or sanction for non-conformist for the policy intended. Political scientists distinguish 3 types of power: force, domination and manipulation.

Authority may be defined as that power associated with a hierarchy of human relationships, which enables those higher up in the hierarchy to command those lower in the hierarchy, and which compels those lower in the hierarchy to obey the commands of those higher up. Authority is predicated upon consent and not entirely by the use of force.

#### **1.3.4.6. Public administration**

Public administration is the action part of government, the means by which the purposes and goals of government are realized (Woodrow Wilson, 1887). Public administration is the organization and management of men and materials to achieve the purpose of government (Dwight Waldo, 1948).

The scope of public administration in its broadest form will include policy analysis, the identification of options, program implementation and a constant pre-occupation with the efficient allocation of resources. The purpose of public administration is to promote a superior understanding of government and its relationship with the society it governs, as well as to encourage public policies more responsive to social needs and to institute managerial practices attuned to effectiveness, efficiency, and the deeper human requisites of the citizenry.

#### Functions of Administration:

All administrative work involve planning, organizing, leading and controlling. Each of these functions requires decisions. Decision making is the means by which administrators plan, organize, lead and control. It is defined as the selection of a preferred course of action from two or more alternatives. Two types of decision have been identified:

- Decision concerning the ends (that is the goals).
- Decision concerning the means (that is the methods).

The decision concerning ends has to do with the basic goals/objective of the organization, and it involves value judgment as to what they should be. The decision concerning the means relates to the selection of alternatives courses of action that will lead to the attainment of specified goals. The

alternatives are usually selected on the basis of rationality. For a decision-maker to be rational, he must conform to the following steps in decision-making process:

2. Ascertain the need for a decision
3. Establish decision criteria
4. Allocate weights to criteria
5. Develop alternatives
6. Evaluate alternatives
7. Select the best alternative

#### **1.3.4.7. Relationship between Political Sciences, Politics and Public health**

Access to health care, budget constraints, factors and processes that influence health and quality of life outcomes of individuals and community, costs of health care services, health disparities, etc. are main issues concerning leaders and politicians in all nations. In fact, the interaction between health decision makers and stakeholders in decisions about the allocation of resources to health care through rationing or medical effectiveness evaluations is the process which involves groups and communities (social) and often concerns the state, its government, or public affairs in general (political). In addition, the access to health care implies at least four levels of health care coverage: availability of personnel and services; ability to use services through insurance or entitlement; affordability or ability to purchase insurance or services; and acceptability, or the perceived value of and barriers to care. During elaboration of health policies and their implementation, theories from political sciences are applied. Health policy which is defined as the way nations, states, cities, and communities distribute resources to competing interventions and competing populations based primarily on anticipated benefits reflects the values of the society or community in terms of how and whom health resources are distributed. Health policy determines legal rights of patients and legal obligations of health professionals. Primary health care is considered as the basis for effective, efficient, and equitable health systems.

#### **1.4. Behavioral sciences and public health**

The social and behavioral sciences in public health address the behavioral, social and cultural factors related to individual and population health and health disparities over the life course. Research and practice in this area contributes to the development, administration and evaluation of programs and policies in public health and health services to promote and sustain healthy environments and healthy lives for individuals and populations.

Health professionals need knowledge of culture and cross-cultural relationship skills because health services are more effective when responsive to cultural needs. Medical Anthropology is a social science field devoted to investigating and understanding health, illness and healing from the perspective of the Sociocultural Model. It is the primary discipline addressing the interfaces of medicine, culture and health behavior and incorporating cultural perspective into clinical settings and public health programs.

In addition, the awareness of the influence of psychosocial factors on a patient's illness and treatment outcome led to the development of psychosomatic medicine and a proliferation of psychological and sociocultural models of healthcare as alternatives to pure biomedicine. But these models were flawed in the same way as biomedicine. By mid 1970s, there was increasing recognition that a more comprehensive approach to healthcare was needed: the biopsychosocial model.

## **CHAPTER TWO: HEALTH, WELLNESS AND PUBLIC HEALTH**

### **2.1. Health and wellness**

The World Health Organization defined **health** as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO, 1948). Prior to that definition, a person were considered to be "healthy" if he/she were not sick.

**Wellness** is the positive component of optimal health. It is the integration of many different components that expand one's potential to live and work effectively and to make a significant contribution to society. Wellness reflects how one feels about life as well as one's ability to function effectively.

Health and wellness are multidimensional. The dimensions of health and wellness include the emotional/mental, intellectual, social, spiritual and physical. Each specific dimension relates to each of the others and overlaps all others. The overlap is so frequent and so great that the specific contribution of each thread is almost indistinguishable when looking at the total. The total is clearly greater than the sum.

### **2.2. Factors influencing health and wellness**

#### **2.2.1. Hereditary factors**

Human biology or heredity factors influence each of the parts of health-related physical fitness. Each of us reaps different benefits from healthy lifestyles, based on our hereditary tendencies. More important is that predispositions to disease are inherited. For example, some early deaths are a result of hereditary conditions (e.g., congenital heart defects) that are untreatable. Obviously, some inherited conditions are manageable (e.g., diabetes) with proper medical supervision and appropriate lifestyles. Heredity is a factor over which we have little control.

#### **2.2.2. Health care system**

The quality of life for those who are sick and those who tend to be sick is influenced greatly by the type of medical care received. However, one of the great health inequities is that those with lower income are less likely to be insured so that the access to health care is not equally available to all. Those without health insurance are more likely to go but less likely to be admitted to emergency rooms, are less likely to get high-quality medical care, and are at greater risk for complications from illness than those with insurance. Those without insurance often have chronic conditions that go undetected and as a result become untreatable.

### **2.2.3. Environmental factors**

Environmental factors contribute on a considerable number of early deaths and affect quality of life in many ways. Some of the more important environmental factors are physical environment, social environment, spiritual environment, intellectual environment and work environment.

#### **a) Physical environment**

Pollution, loss of natural resources, urban sprawl and population growth are the main factors influencing the physical environment. Many of these factors interact with each other. Urban sprawl and population growth for example, are responsible for increased auto travel, and automobiles are the leading source of air pollution. Autos are also a cause of many accidental deaths (safety concern). Air and water pollution results in a variety of health problems and lowered quality of life. Pollution and sanitation problems are associated with population density and are much more likely to cause health problems for low-income people than for those in the middle class. Urban sprawl has also been associated with the heat island effect (the increase in temperature in industrial and inner-city areas) associated with increases in roadways and rooftops, as well as decreased vegetation.

#### **b) Social environment**

Being a part of the greater community is important to social and mental health. We all need friendly personal interactions. These relationships contribute to all aspects of health and wellness. A healthy social environment offers opportunities for friendly interactions in a supportive environment. Support by others, especially family members is important to everybody. Social environment which is not healthy and abusive relationships have a negative impact on health of people.

#### **c) Spiritual environment**

Finding a community for worship and/or spiritual support has been shown to be comforting and a path to fulfillment for many. Reading spiritual materials, prayer, meditation, and discussions with others of similar and dissimilar beliefs; all provide opportunities to clarify and solidify spiritual beliefs. Personal philosophy, the way of thinking and making decisions influence the quality of life.

#### **d) Intellectual environment**

Evidence shows that people with more education are more likely to practice healthy life styles, to seek medical help, and to live in healthy environments than those with less education. Environments that foster learning and sound critical thinking are important to intellectual wellness.

#### **e) Work environment**

The work environment is a combination of the physical, social, intellectual and spiritual environments. Work environments are emphasized because many people spend much time at work.

- Healthy physical environment: a healthy work environment includes a pollution-free work space, reasonable work hours, etc.
- Healthy social environment: good relationships with bosses and co-workers and adequate work breaks are key elements of a healthy social work environment.
- Opportunity and support for healthy lifestyles: opportunities for physical activities and other healthy lifestyles.

#### **2.2.4. Life styles**

##### **➤ Adopting good personal health habits**

###### Examples:

- ✓ Brushing and flossing teeth
- ✓ Regular bathing and hand washing
- ✓ Adequate sleep
- ✓ Care of ears, eyes, and skin

##### **➤ Adopting good safety habits**

###### Examples:

- ✓ Wear seat belts, avoid using the phone while driving, and do not drink and drive for prevention of automobile accidents;
- ✓ Learn to swim, wear life jackets while boating, etc for prevention of water accidents
- ✓ Use ladders and electrical equipment safely

##### **➤ Learning first aid**

➤ **Avoid destructive habits**

Examples:

- ✓ Do not abuse drugs including alcohol
- ✓ Do not use tobacco
- ✓ Practice safe sex

### 2.3. The concepts of disease, sickness and illness

Scientists indicate the difference between disease, sickness and illness.

- **Disease** is defined by its etiology, that is, as a process that is caused by environmental trauma, biological malfunction, or an identifiable agent or substance. Disease may be due to a structural defect, such as an aortic aneurysm, or a functional impairment, such as an underactive thyroid gland (hypothyroidism). Disease is the physiological process of pathology.
- **Sickness** is different from having a disease. An individual can look and feel sick, yet have no identifiable disease such as an infection, defective organ, or impaired physiologic functioning. Conversely, a person can have a disease for any or all of these reasons but not feel or act sick. Being perceived as sick by others or feeling sick oneself implies assuming a sick role that is defined within relationships, families, the workplace, or the community.
- **Illness** is the personal, social and cultural influences on the experience of impairment, pathology and disease. Illness represents the totality of how the patient behaves and feels, how the patient perceives the disease, and how the family and the community respond to these perceptions. Illness behavior varies according to the person's place within the family or community. The patient's explanation of how or why the illness occurred, and the course the illness takes, determines how the patient behaves and how the larger community will respond. The framework that focuses on illness is called the Sociocultural Model.

Disease, sickness, and illness can, but do not necessarily, coexist in a patient. For example, a patient can have a disease, be seen as sick, and yet act well.

## **2.4. The quality of life**

Quality of life is a degree to which a person feels happy and satisfied in life. The term “quality of life” refers to both objective and subjective axes of human existence. The objective axis incorporates norm-referenced measures of objective well-being. These include social indicators such as the availability of medical care, income, standard of housing, etc. They also include any variable which can be accurately measured in terms of quantity or frequency, such as the number of friends that a person has or the number of times they are ill. The subjective axis incorporates measures of perceived well-being. It is also referred to as subjective well-being and life satisfaction. It includes those measures of well-being which cannot be measured accurately by anyone other than the person who is experiencing the state. Both objective and subjective quality of life can be considered to consist of a number of domains which, in sum, constitute the quality of life construct. The seven domains can be identified: material wealth/well-being, health, work or other form of productive activity, social/family connections, safety, community connection, and emotional well-being.

Although Quality of Life is a broadly used term, it should not be confused with what Mercer refers to as Quality of Living. People perceive many different things when they speak of quality of living. There is great diversity in ideas about quality of living, thus reflecting the different use of the term and different understanding depending on age, gender social position, etc. of the person. Quality of life is about a person’s emotional state and personal life. One may live in the highest ranked city in terms of quality of living and still have a very bad quality of life because of unfortunate personal circumstances (illness, unemployment or loneliness, etc). Indeed, definition of Quality of life may differ according to levels of income, social status, health and/or weather conditions. Quality of living reflects the interaction of political, socio-economic and environmental factors in the location.

## **2.5. Public health and health promotion**

Public health is defined as the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organizations, public and private, community and individuals.

The World Health Organization (WHO) acknowledges the growing evidence that health promotion and preventive health approaches are effective in improving overall health and wellbeing, reducing the burden of chronic disease and injury, addressing health inequities, facilitating the better use of resources and enhancing economic productivity.

**The objectives of contemporary health promotion are:**

- To promote equity
- To ensure social justice
- To advocate for improved population health outcomes
- To work in partnership
- To ensure intersectoral collaboration
- To promote community engagement
- To support empowerment
- To promote sustainability
- To embrace evidence based practice
- To value contextual knowledge
- To celebrate and value cultural knowledge
- To improve health literacy through system level changes.

**In essence, health promotion is about:**

- Empowering individuals and populations to have control over, and make informed decisions about their health
- Providing supportive social, economic and physical environments through diverse but complementary strategies
- Working in collaboration with a wide range of sectors
- Enabling individuals to take control over the determinants of health
- Equipping systems and sectors to address the social determinants of health.

## **2.6. Stress and health**

### **2.6.1. Definition of stress**

Most current definitions state that stress is the mental and physical response and adaptation by our bodies to the real or perceived changes and challenges in our lives. A **stressor** is any real or perceived physical, social, or psychological event or stimulus that causes our bodies to react or respond. Several factors influence one's response to stressors, including the characteristics of the stressor (Can you control it? Is it predictable? Does it occur often?); biological factors (e.g., your age or gender); and past experiences (e.g., things that have happened to you, their consequences, and how you responded).

Stress can be associated with most daily activities. Stressors may be tangible, such as a failing grade on a test, or intangible, such as the angst associated with meeting your significant other's parents for

the first time. Importantly, stress is in the eye of the beholder: Each person's unique combination of heredity, life experiences, personality, and ability to cope influences how the person perceives an event and what meaning he or she attaches to it. Stress isn't necessarily bad for individuals. Although events that cause prolonged negative stress, such as a natural disaster, can undermine health, positive, yet stressful, events can have positive effects on the growth and well-being. Generally, positive stress is called **eustress**. Eustress presents the opportunity for personal growth and satisfaction and can actually improve health. It can energize you, motivate you, and raise you up when you are down. Events such as getting married, having a child, getting a promotion at work, or winning a major competition can give rise to the pleasurable rush associated with eustress. In general, people perform at their best and live their lives to the fullest when they experience a moderate level of stress—just enough to keep them challenged and motivated—and deal with that stress in a productive manner. Just as too much stress can be detrimental to health, too little stress leaves you stagnant and unfulfilled. In contrast, **distress**, or negative stress, is caused by events that result in debilitating tension and strain, such as financial problems, the death of a loved one, academic difficulties, and the breakup of a relationship. There are two kinds of distress: acute and chronic. Acute stress is typically intense, flares quickly, and disappears quickly. Although chronic stress may not feel as intense, it can linger indefinitely and wreak silent havoc on your body's systems. Losing your mother after her long battle with breast cancer can cause prolonged stress responses in your body. For months after her death, you may struggle to balance the need to process emotions such as anger, grief, loneliness, and guilt, while focusing to stay caught up in classes and with your life. On any given day, we all experience both eustress and distress, each triggered by a wide range of both obvious and not-so-obvious sources. Several studies in recent years have examined sources of stress among various populations. Surveys found that concerns over money, work, family, and health were major sources of stress. Awareness of the sources of the stress in life can do much to help in development of a plan to avoid, prevent, and control the things that cause the stress.

### **2.6.2. Sources of Stress**

Although stress can come from the environment and other external sources, it can result from internal factors as well. Internal stressors such as negative appraisal, low self-esteem, and low self-efficacy can cause unsettling thoughts or feelings, and can ultimately affect your health. We can experience stress from four basic sources:

- **The Environment:** the environment can bombard you with intense and competing demands to adjust. Examples of environmental stressors include weather, noise, crowding, pollution, traffic, unsafe and substandard housing, and crime.
- **Social Stressors:** we can experience multiple stressors arising from the demands of the different social roles we occupy, such as parent, spouse, caregiver, and employee. Some examples of social stressors include deadlines, financial problems, job interviews, presentations, disagreements, demands for your time and attention, loss of a loved one, divorce, and co-parenting. Psychosocial stressors refer to the factors in our daily routines and in our social and physical environments that cause us to experience stress.
- **Physiological:** Situations and circumstances affecting our body can be experienced as physiological stressors. Examples of physiological stressors include rapid growth of adolescence, menopause, illness, aging, giving birth, accidents, lack of exercise, poor nutrition, and sleep disturbances.
- **Thoughts:** Your brain interprets and perceives situations as stressful, difficult, painful, or pleasant. Some situations in life are stress provoking, but it is our thoughts that determine whether they are a problem for us.

### 2.6.3. Effects of Stress

Stress is often described as a “disease of prolonged arousal” that leads to a cascade of negative health effects whose likelihood increases with ongoing stress. Nearly all body systems become potential targets, and the long-term effects may be devastating. You may not even notice how stressed you are until your body starts sending you signals.

- **Stress and cardiovascular disease:** the most documented health consequence of unresolved stress is cardiovascular disease (CVD). Research has demonstrated the impact of chronic stress on heart rate, blood pressure, heart attack, and stroke. Research has also shown direct links between CVD and external stressors.
- **Stress and weight gain:** higher stress levels may increase cortisol levels in the bloodstream, contributing to hunger and activating fat-storing enzymes; studies also support the theory that cortisol plays a role in increased belly fat and eating behaviors.
- **Stress and hair loss:** The most common stress-induced hair loss is telogen effluvium. Often seen in individuals who have suffered a death in the family, had a difficult pregnancy, or experienced severe weight loss, this condition pushes colonies of hair into a resting phase in which much more hair falls out than grows. A similar condition, alopecia areata, occurs when stress triggers white blood cells to attack and destroy hair follicles.

- **Stress and Diabetes:** Controlling stress is critical for preventing development of type 2 diabetes, as well as for successful diabetes management.
- People under severe stress often don't get enough sleep, don't eat well, and may drink or take other drugs. These behaviors can alter blood sugar levels and promote development of diabetes.
- **Stress and digestive problems:** The causes of digestive disorders are often unknown; most likely, an underlying illness, pathogen, injury, or inflammation is exacerbated by stress, triggering nausea, vomiting, stomach cramps, or diarrhea.
- **Intellectual and psychological effects of stress:** Stress can play a huge role in whether a student stays in school, gets good grades, and succeeds on a career path. It can also wreak havoc on a person's ability to concentrate, remember, and understand and retain complex information.
- **Stress, memory, and concentration:** Animal studies provide compelling indicators of how glucocorticoids— stress hormones released from the adrenal cortex—affect memory. In humans, acute stress has been shown to impair short term memory, particularly verbal memory. Prolonged exposure to cortisol (a key stress hormone) has been linked to shrinking of the hippocampus, the brain's major memory center. In chronically stressed rats, decision-making regions of the brain shriveled, while brain sectors responsible for habitual behaviors not reliant on memory increased.
- Stress is an enormous contributor to mental disability and emotional dysfunction in industrialized nations. Studies have linked rates of mental disorders, particularly depression and anxiety, to environmental stressors, including divorce, marital conflict, and economic hardship. Stressful life events and inadequate social support contribute to mental disorders among people aged 15 to 24 more than among other age groups. Researchers suggest that individuals moving from adolescence into adulthood face increased stressors of all kinds. The high incidence of suicide among college students is assumed to indicate high personal and societal stress in the lives of young people, as is the increasing rate of anxiety disorders.

#### **2.6.4. Work related stress**

Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and challenge their ability to cope. Stress occurs in a wide range of work circumstances but is often made worse when employees feel they have little support from supervisors and colleagues and where they have little control over work or how they can cope with its demands and pressures. Work stress is recognized worldwide as a major challenge to workers' health and healthiness of their organizations. When there is a perceived

imbalance between demands and the resources (personal and environmental) available to cope with them, the worker's reactions may include:

- Physiological responses (for example increased heart rate, blood pressure, hyperventilation, as well as secretion of 'stress' hormones such as adrenaline and cortisol);
- Emotional responses (for example feeling nervous or irritated);
- Cognitive responses (for example, reduction or narrowing of attention and perception, forgetfulness); and
- Behavioral reactions (for example aggressive, impulsive behavior, making mistakes).

There is often confusion between pressure or challenge and stress and sometimes it is used to excuse bad management practice. Pressure at the workplace is unavoidable due to the demands of the contemporary work environment. Pressure perceived as acceptable by an individual, may even keep workers alert, motivated, able to work and learn, depending on the available resources and personal characteristics. However, when that pressure becomes excessive or otherwise unmanageable, it leads to stress.

Most of the causes of work stress concern the way work is designed and the way in which organizations are managed. Because these aspects of work have the potential for causing harm, they are called "stress-related hazards". The literature on stress generally recognizes nine categories of stress-related hazards at work:

A. Work content:

1. Job content
2. Workload and work pace
3. Working hours
4. Participation and control

B. Work context:

5. Career development, status and pay
6. Role in the organization
7. Interpersonal relationships
8. Organizational culture
9. Home-work interface

There are a number of ways by which risk of work stress can be reduced. These include:

- Primary prevention, reducing stress through:
  - Ergonomics

- Work and environmental design
- Organization and management development
- Secondary prevention, reducing stress through:
  - Worker education and training, and
- Tertiary prevention, reducing the impact of stress by:
  - Developing more sensitive and responsive management systems and enhanced occupational health provision.

### 2.6.5. Stress management

Stress management refers to the wide spectrum of techniques and psychotherapies aimed at controlling a person's levels of stress, especially chronic stress, usually for the purpose of improving everyday functioning. *Stress management* can teach healthier ways to cope with *stress*, help to reduce its harmful effects, and prevent *stress* from spiraling out of control again in the future.

#### 2.6.5.1. Stress management techniques: mental and physical approaches

##### a) Practicing mental work to reduce stress

Your perceptions often contribute to your stress, so assessing your “self-talk,” beliefs, and actions are good first steps.

- Make a list of things you’re worried about.
- Examine the causes of your problems and worries. Perceptions are often part of the problem; try assessing your “self-talk,” beliefs, and actions.
- Consider the size of each problem. What are the consequences of doing nothing? Of taking action?
- List your options, including ones you may not like much.
- Outline a plan, then act. Even little things can make a big difference.
- Evaluate. How did you do?

##### b) Taking physical action

Physical activities can complement your mental and emotional strategies of stress management:

- Exercise regularly. The human stress response is intended to end in physical activity; exercise “burns off” stress hormones by directing them toward their intended metabolic function and can combat stress by raising levels of endorphins—mood-elevating, painkilling hormones—in the bloodstream.
- Get enough sleep. Adequate sleep allows you to cope with multiple stressors more effectively, and be more productive.

- Learn to relax. You can use simple relaxation techniques at any time. As your body relaxes, your heart rate slows and your blood pressure and metabolic rate decrease.
- Eat healthfully. A balanced, healthy diet will help provide the stamina you need to get through problems while stress-proofing you in ways not yet fully understood. Undereating, overeating, and eating the wrong foods can create distress in the body. In particular, avoid sympathomimetics, foods that produce (or mimic) stress like responses, such as caffeine.

#### **2.6.5.2. Stress management techniques: managing emotional responses**

We often get upset not by realities, but by our faulty perceptions. Stress management requires examining your emotional responses to interactions with others—and remembering that you are responsible for the emotion and the resulting behaviors. Learning to identify emotions based on irrational beliefs, or expressed and interpreted in an over-the-top manner, can help you stop such emotions or express them in healthy and appropriate ways.

#### **2.6.5.3. Stress management techniques: managing the time**

Time management techniques help you to take control of time and reduce stress. One of the most common causes of stress is feeling pressured by a lack of time. While we can't add an hour to your day, these time management techniques enable you to use your time more effectively.

1. goal setting and time management
2. assessing your use of time
3. determining whether you are proactive or reactive
4. planning your work and then working your plan
5. overcoming procrastination

#### **2.6.5.4. Stress management techniques: managing finances**

The current economic downturn is negatively impacting the majority of people in some way, adding to already existing stress and anxiety. Money and employment have been found to be the top two sources of stress for people in many countries. As you work on improving your financial situation, you can reduce stress by practicing stress-reducing techniques and making other changes to create a low-stress lifestyle.

#### **2.6.5.5. Relaxation techniques for stress management**

Relaxation techniques to reduce stress have been practiced for centuries, and there is a wide array of practices from which to choose. Common techniques include yoga, qigong, tai chi, deep breathing, meditation, visualization, progressive muscle relaxation, massage therapy, biofeedback, and hypnosis.

## **CHAPTER THREE: THEORIES AND MODELS OF BEHAVIOR AND BEHAVIOR CHANGE IN PUBLIC HEALTH**

Human behavior plays a central role in the maintenance of health, and the prevention of disease. With an eye to lowering the substantial morbidity and mortality associated with health-related behavior, health professionals have turned to models of behavior change to guide the development of strategies that foster self-protective action, reduce behavior that increase health risk, and facilitate effective adaptation to and coping with illness. Theories and models of human behavior emanate from all disciplines of the social and behavioral sciences.

### **3.1. Stages of Change (Transtheoretical) Model**

The Stages of Change (SoC) model, also referred to as the Transtheoretical Model is a widely applied cognitive model which sub-divides individuals between five categories that represent different milestones, or ‘levels of motivational readiness’, along a continuum of behavior change. These stages are **pre-contemplation, contemplation, preparation, action, and maintenance**.

First developed in relation to smoking, and now commonly applied to other addictive behaviors, the rationale behind a staged model is that individuals at the same stage should face similar problems and barriers, and thus can be helped by the same type of intervention (Nisbet and Gick 2008). Whilst practitioners acknowledge many hundreds of different interventions, the SoC model identifies ten types (‘processes’) which are most widely used and investigated. Movement or transition between stages is driven by two key factors: self-efficacy and decisional balance. Questions regarding how discrete the stages actually are and whether an individual must move through each (and not jump stages) are common. Further to this, the model is not clear on how individuals change or why some change more effectively or quickly than others.

This model shares the problem of other cognitive models in that it is egoistic (centered on the self) and consequently misses the structural economic, environmental and social factors which affect an individual’s ability to change behavior. It is not that the influence of these factors is denied by the model, but rather that they lie outside its boundaries. For example, Prochaska et al. (1992) note that families, friends, neighbors, or employees are often well aware that the precontemplators have a problem. Where precontemplators present for psychotherapy, they often do so because of pressure

from others. SoC also focuses on individual problem behaviors, such as addictions. This has implications for its transferability to behaviors which bring public costs or benefits. The over use of pesticide, for example, could be a problem behavior in terms of water pollution but this is not necessarily a problem for the pesticide user directly.

**The Stages of Change Model in a Health Psychotherapy Context (adapted from Prochaska et al., 1992)**

<b>Stage</b>	<b>Stage Definition</b>	<b>Process</b>	<b>Process Definition</b>	<b>Psychotherapy Interventions</b>
<b>Pre-contemplation</b>	Individual is unaware of problem; no intention to change behavior in foreseeable future	<b>Consciousness raising</b>	Increasing information about self and problem	observations, confrontations, interpretations, bibliotherapy
		<b>Dramatic relief</b>	Experiencing and expressing feelings about one's problems and solutions	psychodrama, grieving losses, role playing
		<b>Environmental re-evaluation</b>	Assessing how one's problem affects physical environment	empathy training, documentaries
<b>Contemplation</b>	Individual is aware of problem; serious consideration of change in behavior	<b>Self-reevaluation</b>	Assessing how one feels and thinks about oneself with respect to a problem	value clarification, imagery, corrective emotional experience
<b>Preparation</b>	Individual is intending to take action	<b>Self-liberation</b>	Choosing and commitment to act or belief in ability to change	decision-making therapy, "New Year's resolutions", logotherapy techniques, commitment enhancing techniques

<b>Action</b>	Individuals modify their behavior, experiences and/or environment in order to overcome problem	<b>Counter-conditioning</b>	Substituting alternatives for problem behaviors	relaxation, desensitization, assertion, positive self statements
		<b>Stimulus control</b>	Avoiding or countering stimuli that elicit problem behaviors	restructuring one's environment (e.g., removing alcohol or fattening foods), avoiding high risk cues, etc
		<b>Helping relationships</b>	Being open and trusting about problems with someone who cares	therapeutic alliance, social support, self-help groups
		<b>Reinforcement management</b>	Rewarding one's self or being rewarded by others for making changes	contingency contracts, overt and covert reinforcement, self-reward
<b>Maintenance</b>	Individual works to prevent relapse and consolidate gains.	<b>Social liberation</b>	Increasing alternatives for non-problem behaviors available in society	advocating for rights of repressed, empowering, policy interventions

### 3.2. Health Belief Model

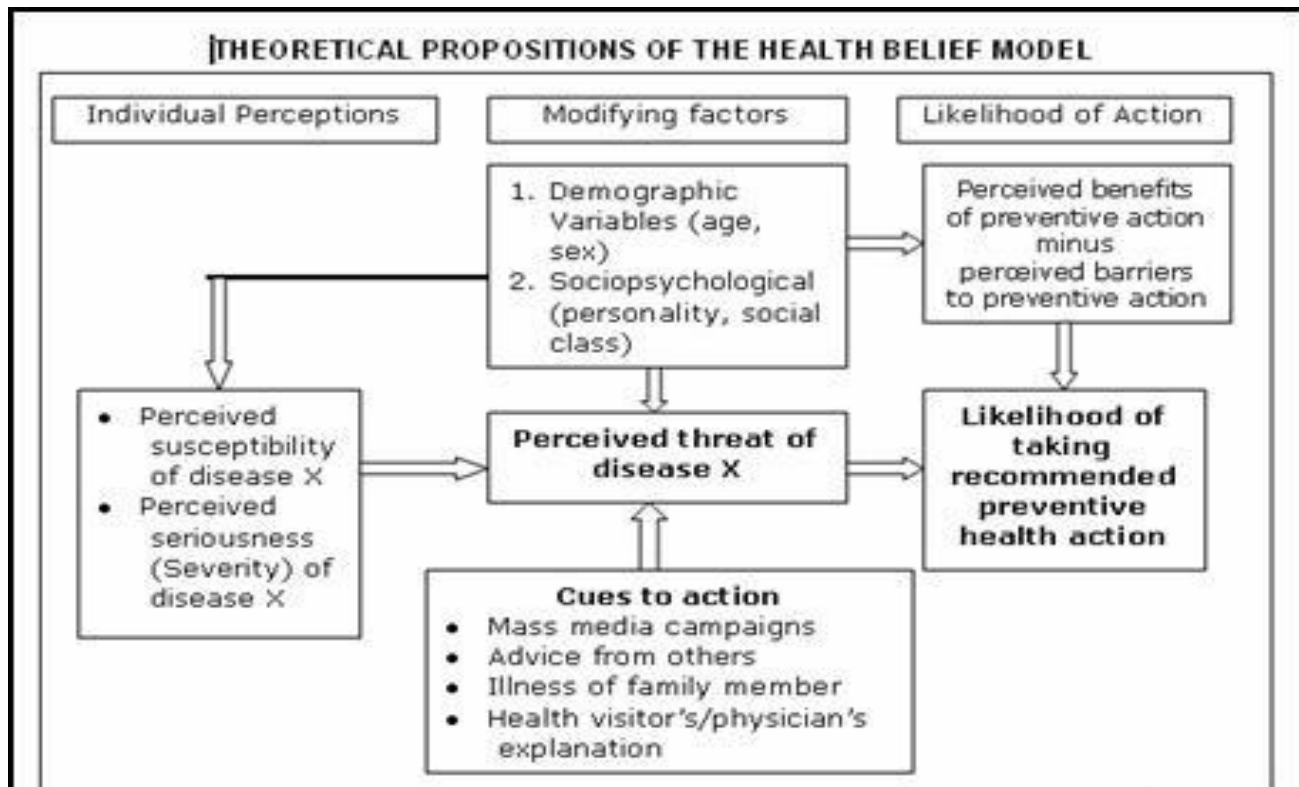
The Health Belief Model (HBM) is one of the first theories of health behavior. It was developed in the 1950s by social psychologists working at the U.S. Public Health Service to explain why many people did not participate in public health programs such as TB or cervical cancer screening. Subsequently, it was extended by Leventhal, Rosenstock, Becker and others to explain different reactions to symptoms and to explain variations in adherence to treatment. It has subsequently been used to guide the design of interventions to enhance compliance with preventive procedures. Although designed and developed in the healthcare context, the HBM has been applied to the analysis of other types of behavior and is most suited to explaining or predicting patterns of behavior.

### a) Conceptual Basis

The HBM was founded on attempts to integrate stimulus-response theory with cognitive theory in explaining behavior. The design of the HBM was influenced by Kurt Lewin's theories which state that perceptions of reality, rather than objective reality, influence behavior. The health belief model proposes that a person's health-related behavior depends on the person's perception of four critical areas:

1. the severity of a potential illness,
2. the person's susceptibility to that illness,
3. the benefits of taking a preventive action, and
4. the barriers to taking that action.

HBM is a popular model applied in nursing, especially in issues focusing on patient compliance and preventive health care practices. The model postulates that health-seeking behavior is influenced by a person's perception of a threat posed by a health problem and the value associated with actions aimed at reducing the threat. HBM addresses the relationship between a person's beliefs and behaviors. It provides a way to understanding and predicting how persons will behave in relation to their health and how they will comply with health care therapies.



### b) The major concepts and definitions of the health belief model

There are six major concepts in HBM: Perceived Susceptibility, Perceived severity, Perceived benefits, Perceived costs, Motivation and Enabling or modifying factors.

1. **Perceived Susceptibility**: refers to a person's perception that a health problem is personally relevant or that a diagnosis of illness is accurate. It is an individual assessment of his or her chances of getting the disease.
2. **Perceived severity**: even when one recognizes personal susceptibility, action will not occur unless the individual perceives the severity to be high enough to have serious organic or social complications.
3. **Perceived benefits**: refers to the patient's belief that a given treatment will cure the illness or help to prevent it.
4. **Perceived Costs**: refers to the complexity, duration, and accessibility of the treatment.
5. **Motivation**: includes the desire to comply with a treatment and the belief that people should do what.
6. **Modifying factors**: include personality variables, patient satisfaction, and socio-demographic factors.

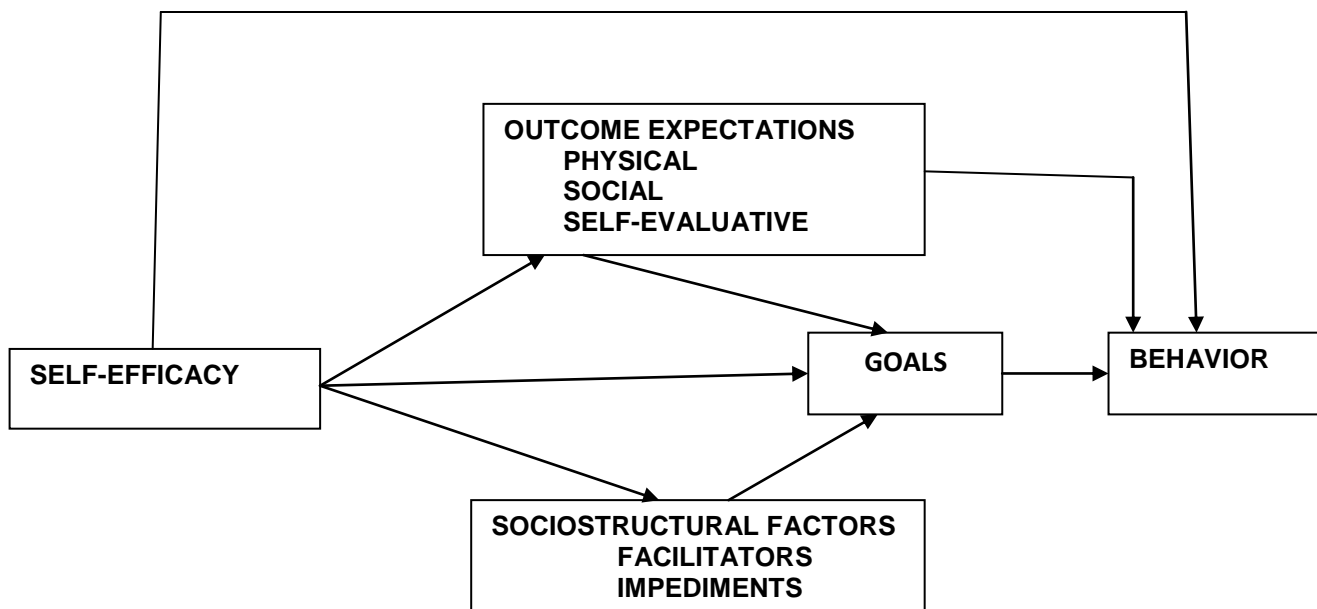
HBM identifies two types of 'cue to action': internal, which in the health context includes symptoms of ill health, and external, which includes media campaigns or the receipt of other information. These cues affect the perception of threat and can trigger or maintain behavior. The individual's perceived capacity to adopt the behavior (their **self-efficacy**) is a further key component of the model.

Nisbet and Gick (2008) summarize the model as follows: 'in order for behavior 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 behavior. Some trigger, either internal or external, is required to ensure actual behavior ensues'. The opposite 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 behaviors. Low benefits and high costs can have the same impact.

### 3.3. Cognitive Social Learning theory

Cognitive social-learning theory proposes that reinforcements are not the sole determinants of behavior, but that behavior changes with observations of others. According to Cognitive social-learning theory, the most important prerequisite for behavior change is a person's sense of self-efficacy or the conviction that one is able successfully to execute the behavior required to produce the desired outcome. People can feel susceptible to an illness, expect to benefit if they change their behavior, and perceive their social environment as encouraging the change, but if they lack the belief that they can indeed change, their efforts are not likely to succeed. Substantial empirical evidence suggests that self-efficacy beliefs (and the related of optimism) are reliable predictors of behavior, and that they mediate the effects of intervention on behavior change, including a number of health-related behaviors. Self-regulation is a concept that derives from cognitive social learning theory. It includes cognitive and behavioral processes that involve the initiation, termination, delay, modulation, modification, or redirection of a person's emotions, thoughts, behaviors, physiological responses, or environment (Compas et al., 1999).

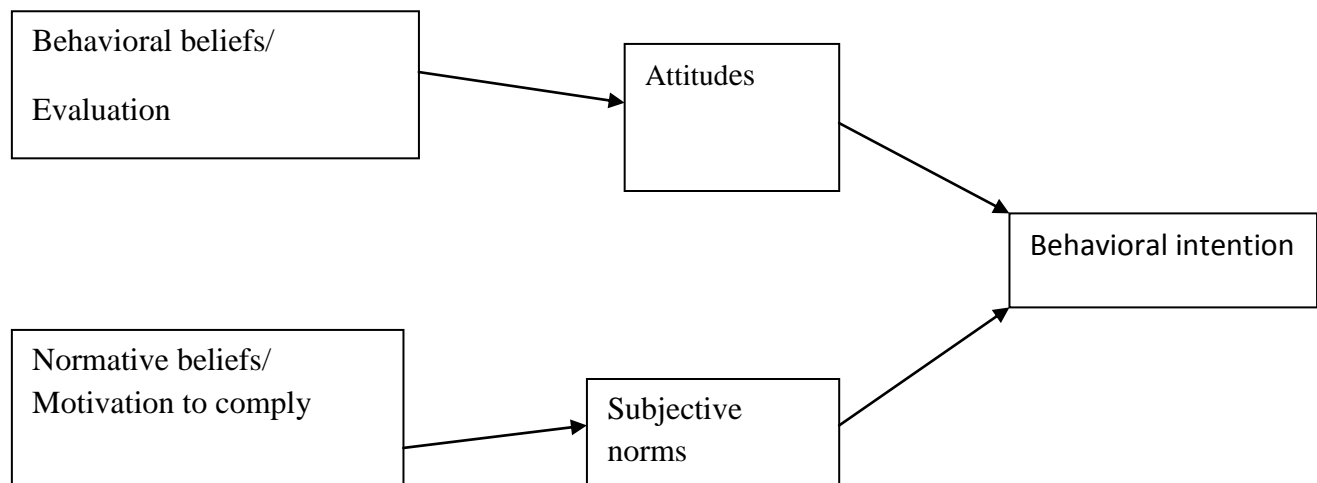
The following figure illustrate major components of Social Cognitive Theory (Bandura, 1986, 2004)



### 3.4. Theory of Reasoned Action

The theory of Reasoned Action was first proposed by Ajzen and Fishbein (1980) to predict an individual's intention to engage in a behavior at a specific time and place. The theory was intended to explain virtually all behaviors over which people have the ability to exert self-control. Factors that influence behavior choices are mediated through the variable of behavior intent. In order to maximize the predictive ability of an intention to perform a specific behavior, it is critical that measures of the intent closely reflect the measures of the behavior, corresponding in terms of action, target, context and time.

Behavioral intentions are influenced by the attitude about the likelihood that the behavior will have the expected outcome and the subjective evaluation of the risks and benefits of that outcome. The predictive power of the model depends significantly on the identification of most or all of the salient outcomes associated with a given behavior for any particular target population.



### 3.5. Theory of Planned Behavior

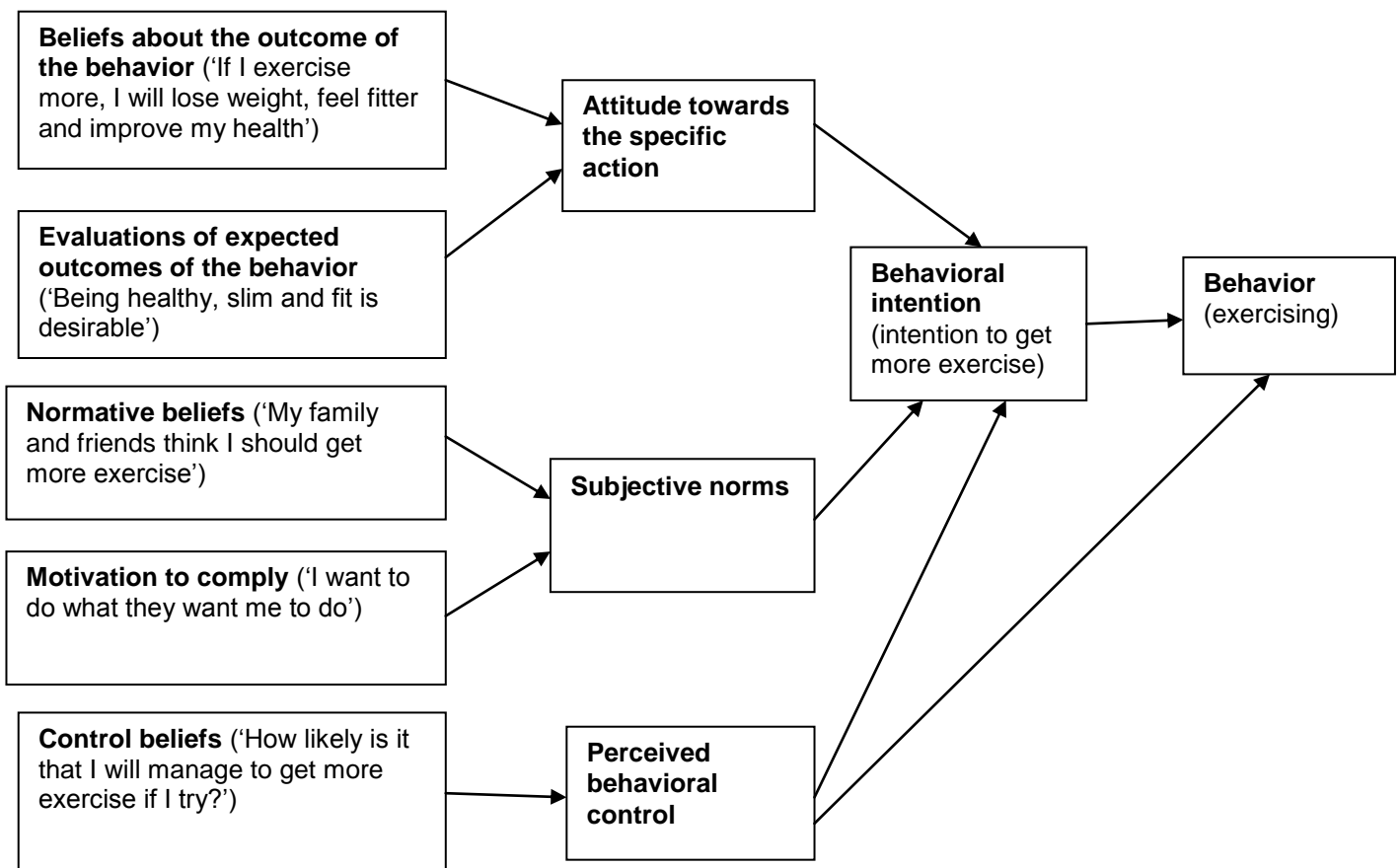
The theory of planned behavior was developed by Ajzen and colleagues (Ajzen, 1985; 1988; Ajzen & Madden, 1986). It emphasizes behavioral intentions as the outcome of a combination of several beliefs. The TPB is one of a closely inter-related family of theories which adopt a cognitive approach to explaining behavior which centers on individuals' attitudes and beliefs. The TPB (Ajzen 1985, 1991; Ajzen and Madden 1986) evolved from the theory of reasoned action (Fishbein and Ajzen 1975) which posited intention to act as the best predictor of behavior. Intention is itself an outcome of the combination of attitudes towards a behavior. That is the positive or negative evaluation of the behavior and its expected outcomes, and subjective norms, which are the social pressures exerted on an individual resulting from their perceptions of what others think they should do and their inclination

to comply with these. The TPB added a third set of factors as affecting intention (and behavior); perceived behavioral control. This is the perceived ease or difficulty with which the individual will be able to perform or carry out the behavior, and is very similar to notions of self-efficacy. The theory proposes that intentions should be conceptualized as ‘plans of action in pursuit of behavioral goals’ (Ajzen & Madden, 1986), and that these are a result of the following composite beliefs:

- **Attitude towards a behavior:** composed of a positive or negative evaluation of a particular behavior, and beliefs about the outcome of the behavior (e.g. ‘exercising is fun and will improve my health’).
- **Subjective norm:** this represents the beliefs of important others about the behavior, and the individual’s motivation to comply with such beliefs (e.g. ‘People who are important to me will approve if I lose weight, and I want their approval’).
- **Perceived behavioral control :** comprising a belief that the individual can carry out a particular behavior based on a consideration of internal control factors (e.g. skills, abilities, information) and external control factors (e.g. obstacles, opportunities). Both of which are related to past behavior.

These three factors predict behavioral intentions, which are then linked to behavior. The theory of planned behavior also states that perceived behavioral control can have a direct effect on behavior without the mediating effect of behavioral intentions.

**The following figure illustrates the key components of the TPB:**



### **TPB applied to alcohol consumption**

Applied to alcohol consumption, the theory would predict that someone will have high intentions to reduce alcohol intake (behavior intentions) if he believes that:

- reducing his alcohol intake will make his life more productive and be beneficial to his health (attitude to the behavior);
- the important people in his life want him to cut down (subjective norm); and
- he is capable of drinking less alcohol due to his past behavior and evaluation of internal and external control factors (high behavioral control).

The model also predicts that perceived behavioral control can predict behavior without the influence of intentions. For example, a belief that the individual would not be able to exercise because they are physically incapable of doing so might well be a better predictor of their exercising behavior than their high intentions.

### **3.6. Social Ecological model**

The field of health and behavior is very large. It includes, at minimum, the intersection of biological, social, and behavioral factors. Biological, behavioral, and social factors such as endowment, cognitive and emotional interpretations of experience, physical environment, social relationships, and socioeconomic status interact through multiple feedback mechanisms to influence individual health over time. Because health is not defined solely in biological terms but also is a function of psychological and social variables, many events or interventions traditionally considered irrelevant actually are quite important for the health status of individuals and populations.

**b) Ecological Approach to Health and Behavior Research and Practice**

<b>Ecological level</b>	<b>Change Process</b>	<b>Target of change at each level</b>	<b>Strategies and skills at each level</b>
<b>Individual</b>	Physiological	HPA (Hypothalamic-Pituitary-Adrenal) axis CNS (limbic and other systems) Immune system Metabolism Cardiovascular system	Physical activity Pharmacologic therapies Meditation Biofeedback Hypnosis Cognitive therapies
	Psychological	Developmental processes Knowledge Attitudes Beliefs Values Skills Behaviors Self-concept, self-efficacy, self-esteem	Tests and measurements Role modeling Education Mass media Social marketing Skills development Resistance to peer pressure Patient counseling and education
<b>Family, Social networks</b>	Psychosocial	Social networks Social support Families Workgroups Peers neighbors	Extending social networks Changing group norms Strengthening families Social support groups Increasing social support
<b>Organization</b>	Organizational	Norms Incentives Organizational culture Management styles Organizational structure Communication networks	Organizational development Incentive programs Coalition development Participatory action research Team development
<b>Community</b>	Cultural and social	Economic opportunities Community resources Neighborhood organizations Community competencies Social and health services Organizational relationships Governmental structures Formal leadership Informal leadership	Community development Community coalitions Empowerment Conflict strategies Media advocacy Public advocacy Consciousness raising Social action Community based participatory research
<b>Population (Societal)</b>	Public policy	Legislation Regulations Tax policy	Media advocacy Policy analysis Political change Lobbying Political organizing

c) **The Social Ecological Model (SEM) developed by McLeroy et al (1988)**

The Social Ecological Model (SEM) developed by McLeroy et al (1988) has two key concepts:

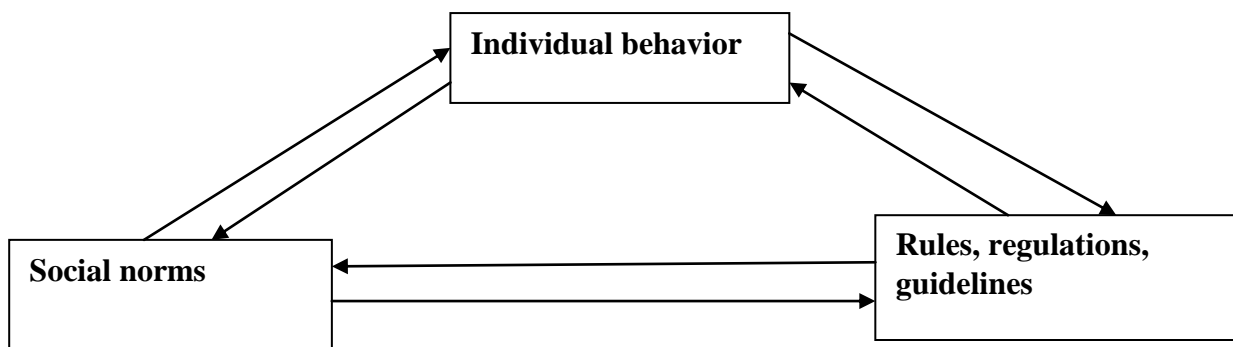
A) **Five levels of influence**

According to McLeroy et al (1988), behavior affects and is affected by multiple levels of influence: Intrapersonal, Interpersonal, Organizational, Community and Public policy levels

LEVEL OF INFLUENCE	DESCRIPTION
1. <b>Intrapersonal</b>	Individual characteristics that influence behavior: Knowledge, skills, self-efficacy
2. <b>Interpersonal</b> Family, friends, peers	Interpersonal processes and groups providing identity and support
3. <b>Organizational</b> Churches, stores, community organizations	Rules, regulation, policies, structures constraining or promote behaviors
4. <b>Community</b> Social networks	Community norms (community regulations)
5. <b>Public policy</b> Local, state, federal	Policies and laws that regulate or support healthy practices/actions

B) **Reciprocal causation**

Individual behavior shapes, and is shaped by the social environment, the similar idea in Social Cognitive Theory.



The application of social ecological theories and models focus on several goals: to explain the person-environment interaction, to improve people-environment transactions, to nurture human growth and development in particular environments, and to improve environments so they support expression of individual's system's dispositions. Interventions that use the social ecological model as a framework include mass media campaigns, social marketing, and skills development.

- In community health promotion: identifying high impact leverage points and intermediaries within organizations that can facilitate the successful implementation of health promoting interventions, combining person focused and environmentally based components within comprehensive health promotion programs, and measuring the scope and sustainability of intervention outcomes over prolonged periods. Basis of intervention programs to address issues such as bullying, obesity, overeating and physical activity.
- In personal health: to prevent illnesses, a person should avoid an environment in which they may be more susceptible to contracting a virus or where their immune system would be weakened. This also includes possibly removing oneself from a potentially dangerous environment or avoiding a sick coworker. On the other hand, some environments are particularly conducive to health benefits. Surrounding oneself with physically fit people will potentially act as a motivator to become more active, diet, or work out at the gym. The government banning “trans fat” may have a positive top-down effect on the health of all individuals in that state or country.
- In human nutrition: used as a model for nutrition research and interventions. The social ecological model looks at multiple levels of influence on specific health behaviors. Levels include intrapersonal (individual's knowledge, demographics, attitudes, values, skills, behavior, self-concept, self-esteem), interpersonal (social networks, social supports, families, work groups, peers, friends, neighbors), organizational (norms, incentives, organizational culture, management styles, organizational structure, communication networks), community (community resources, neighborhood organizations, folk practices, non-profit organizations, informal and formal leadership practices), and public policy level (legislation, policies, taxes, regulatory agencies, laws). Multi-level interventions are thought to be most effective in changing behavior.
- In public health: drawing upon this model to address the health of a nation's population is viewed as critically important to the strategic alignment of policy and services across the continuum of population health needs, including the design of effective health promotion and disease prevention and control strategies. Thus also, in the development of universal health care systems, it is appropriate to recognize "Health in All Policies" as the overarching policy framework, with public health, primary health care and community services as the cross-cutting framework for all health and health-related services operating across the spectrum from primary prevention to long term care and end-stage conditions. Although this perspective is both logical and well grounded, the reality is different in most settings, and there is room for improvement everywhere

**Example of Social Ecological Model application: Eat healthy foods**

<b>LEVEL OF INFLUENCE</b>	<b>DESCRIPTION</b>
1. <b>Intrapersonal</b>	Knowledge about different foods, skills in cooking, self-efficacy to make changes in diet
2. <b>Interpersonal</b> Family, friends, peers	Patterns of food preparation in household, food habits of peers
3. <b>Organizational</b> Churches, stores, community organizations, food manufacturers	Food availability and prices in local stores & restaurants, foods served at church dinners, actions by community groups to improve local availability of healthy foods
4. <b>Community</b>	Community norms regarding diet
5. <b>Public policy</b> Local, state, federal	Regulations on fat and sodium content and labeling of foods, food stamps, subsidies to agri-business

## **CHAPTER FOUR: COUNSELING**

### **4.1. Definition of Counseling**

Counseling is defined as “a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals” ([www.counseling.org/20-20/index.aspx](http://www.counseling.org/20-20/index.aspx)).

Counseling is a process, organized in a series of steps, which aims to help people cope (deal with or adapt to) better with situations they are facing. This involves helping the individual to understand their emotions and feelings and to help them make positive choices and decisions. It is an approach for assisting people to reduce initial distress resulting from a difficult situation, and to encourage short and long-term adaptive functioning (positive coping).

These definitions contain a number of implicit and explicit points that are important for counselors as well as consumers to realize.

- Counseling deals with wellness, personal growth, career, education, and empowerment concerns. In other words, counselors work in areas that involve a plethora of issues including those that are personal and those that are interpersonal. These areas include concerns related to finding meaning, adjustment, and fulfillment in mental and physical health, and the achievement of goals in such settings as work and school. Counselors are concerned with social justice and advocate for the oppressed and powerless as a part of the process.
- Counseling is conducted with persons individually, in groups, and in families. Clients seen by counselors live and work in a wide variety of settings. Their problems may require short-term or long-term interventions that focus on just one person or with multiple individuals who are related or not related to each other.
- Counseling is diverse and multicultural. Counselors see clients with varied cultural backgrounds. Those from minority and majority cultures are helped in a variety of ways depending on their needs, which may include addressing larger societal issues, such as discrimination or prejudice.
- Counseling is a dynamic process. Counselors not only focus on their clients' goals, they help clients accomplish them. This dynamic process comes through using a variety of theories and methods. Thus, counseling involves making choices as well as changes. Counseling is lively and engaging. In most cases, “counseling is a rehearsal for action” (Casey, 1996, p. 176) either internally with thoughts and feelings or externally with behavior.

The American Counseling Association (ACA) has defined a professional counseling specialty, which is an area (within counseling) that is “narrowly focused, requiring advanced knowledge in the field” of counseling ([www.counseling.org](http://www.counseling.org)). Among the specialties within counseling are those dealing with educational settings such as schools or colleges and those pertaining to situations in life such as marriage, mental health, rehabilitation, aging, addiction, and careers. According to the ACA, becoming a specialist is founded on the premise that “all professional counselors must first meet the requirements for the general practice of professional counseling” ([www.counseling.org](http://www.counseling.org)).

Today professional counseling encompasses within its practice clinicians who still focus on the avoidance of problems and the promotion of growth, but the profession is much more than that. The focus on wellness, development, mindfulness, meaningfulness, and remediation of mental disorders is the hallmark of counseling for individuals, groups, couples, and families across the life span.

To understand what counseling is now, it is important to understand the history of the profession and how counseling is similar to and different from concepts such as guidance and psychotherapy.

#### **4.2. Counseling and Guidance**

Guidance focuses on helping people make important choices that affect their lives, such as choosing a preferred lifestyle. Although the decision-making aspect of guidance has long played an important role in the counseling process, the concept itself, as a word in counseling, “has gone the way of ‘consumption’ in medicine” (Tyler, 1986). It has more historical significance than present-day usage. Nevertheless, it sometimes distinguishes a way of helping that differs from the more encompassing word “counseling.” One distinction between guidance and counseling is that guidance centers on helping individuals choose what they value most, whereas counseling helps them make changes. Much of the early work in guidance occurred in schools and career centers where an adult would help a student make decisions, such as deciding on a course of study or a vocation. That relationship was between unequals and was beneficial in helping the less experienced person find direction in life. Similarly, children have long received “guidance” from parents, religious leaders, and coaches. In the process they have gained an understanding of themselves and their world. Guidance is only one part of the overall services provided by professional counseling.

#### **4.3. Counseling and Psychotherapy**

Traditionally, psychotherapy (or therapy) has focused on serious problems associated with intrapsychic, internal, and personal issues and conflicts. It has dealt with the “recovery of adequacy” (Casey, 1996). Psychotherapy has historically involved a long-term relationship (20 to 40 sessions over a period of 6 months to 2 years) that concentrated on reconstructive change as opposed to a more

short-term relationship (8 to 12 sessions spread over a period of less than 6 months). Psychotherapy has also been more of a process associated with inpatient settings (some of which are residential, such as mental hospitals) as opposed to outpatient settings (some of which are nonresidential, such as community agencies). However, in more modern times, the distinction between psychotherapy and counseling has blurred, and professionals who provide clinical services often determine whether clients receive counseling or psychotherapy. Some counseling theories are commonly referred to as therapies as well and can be used in multiple settings. Therefore, the similarities in the counseling and psychotherapy processes often overlap.

#### **4.4. Types of counseling**

There are several types of counseling that follow similar lines to the various different types of psychotherapy. Each model has its own theory of human development and its own way of working. Some practitioners work in an ‘eclectic’ way, which means that they draw on elements of several different models when working with clients. Others practise a form of ‘integrative’ counseling, which draws on and blends two or more specific types.

From the client’s point of view, perhaps the most obvious difference between the types of counseling is whether the counselor is directive (suggesting courses of action and perhaps giving ‘homework’ exercises) or non-directive (with the client taking the lead in what’s discussed). While it's not possible to include all the various types available, the most popular are Person-Centered or Client-centered counseling, Transpersonal counseling, Transactional analysis counseling, Existential counseling, cognitive-behavioral counseling, Psychodynamic counseling, Gestalt counseling, Brief solution focus therapy, and Integrative approaches.

#### **4.5. Qualities of an effective counselor**

- Confidentiality
- Empathy
- Positive regard
- Respect for others
- Warmth
- Being genuine
- Being non judgmental
- Listening skills

#### **4.6. The Counseling Process**

The counseling process has six components which proceed sequentially. These are:

- 1) Diagnosing problems
- 2) Setting appropriate goals
- 3) Specifying Objectives
- 4) Generating and deciding among alternatives
- 5) Preparing action plans
- 6) Implementing and evaluating plans.

A counseling session is sometimes referred to as the 50 minute hour. Its process depends on the client's needs and the counselor's personal approach to counseling. Although there is some variation during a session, there is a basic structure. That structure was described by Cormier and Hackney (1987) as a five stage process: relationship building, assessment, goal setting, interventions, and termination and follow up. These stages have been expanded in the following six stage model of the counseling process:

- Stage one: Relationship building
- Stage two: Assessment and diagnosis
- Stage three: Formulation of counseling goals
- Stage four: Intervention and problem solving
- Stage five: Termination and follow up
- Stage six: Research and evaluation

Counseling can be conceptualized as a series of stages or steps that lead one through the counseling process. A typical counseling session can involve all six stages except termination. The focus of counseling may shift as the counseling process progresses over time. For example, during the first few sessions with a client, a counselor may place the primary emphasis on building a positive counseling relationship, assessment and diagnosis, and formulating counseling goals. During the later phase of the counseling process, the counselor may shift the emphasis to intervention and problem solving, termination and follow-up, and research and evaluation.

#### **4.7. The principles of basic counseling**

Counseling aims to help people cope better with situations they are facing. This involves helping the individual to cope with their emotions and feelings and to help them make positive choices and decisions.

Doing this involves:

- establishing a trusting relationship;
- helping the client tell their story;
- listening carefully;
- respecting the client;
- being non-judgmental;
- providing confidentiality;
- providing correct information;
- helping the individual make informed decisions;
- helping the client to recognize and build on their strengths;
- helping the client develop a positive attitude; and
- maintaining a professional relationship.

It does not involve:

- making decisions for the client;
- judging, interrogating, blaming, preaching, lecturing or arguing;
- making promises that you cannot keep;
- allowing clients to become dependent on you.

#### **4.8. Essential counseling techniques**

- Effective questioning
- Active listening
- Paraphrasing, summarizing, and clarifying
- Reflecting and validating feelings
- Giving clear information
- Arriving at agreement
- Avoid inappropriate responses:
  - Judging: For example, “You wouldn’t have these problems if you had acted differently!”
  - Attacking: For example, “How could you be that irresponsible?”
  - Denial: For example, “Don’t worry. I’m sure that it’s nothing important.”
  - Pity: For example, “Poor thing! How terrible that happened!”

There are several important tools in the counseling which enable to effectively communicate and counsel others: asking questions, active listening, encouraging body language, paraphrasing and summarizing.

## CHAPTER FIVE: APPLICATION OF COMMUNICATION SKILLS IN PUBLIC HEALTH

### 5.1. Interpersonal communication

#### 5.1.1. Definition of communication

**Communication** is the process of transmitting information from one person to another. It is an exchange of information between individuals by means of speaking, writing, or using common system of signs and behaviors.

**Effective communication** is the process of sending a message in such a way that the message received is as close in meaning as possible to the message intended.

#### 5.1.2. The goals of communication

The goals of communication are to influence, inform, and/or to express feelings

- Influence: when you communicate to get what you want, your goal is to influence
- Inform: information can serve as the basis of decision making
- Express feeling: when communicating, people often express their feelings verbally and non verbally. They convey both information and how they feel about the relationship they have.

Before sending the message, the sender should plan:

- **What** is the goal of the message
- **Who** should receive the message
- **How** you will encode the message (with the receiver in mind) so that it will be understood. Select appropriate media for the audience and the situation. What will be said, done, written, and so on?
- **When** will the message be transmitted
- **Where** the message will be transmitted

#### 5.1.3. The communication process

Communication requires a sender to **encode** a message and **transmit the message** to a receiver who **decodes** it.

- **Encoding** is the sender's process of putting the message into a form that the receiver will understand
- **The message** is the physical form of the encoded information. The message can be transmitted in three major ways: orally, in writing, and/or non verbally.

- **Decoding** is the receiver's process of translating the message into a meaningful form. The receiver interprets what the sender is communicating.

#### **5.1.4. Message transmission media**

Media are the forms of the transmitted message. Media can also be defined as means and institutions for publishing and broadcasting information. When encoding the message, the sender should give careful consideration to selecting media.

##### **a) Oral communication**

- Face-to-face
- Telephone
- Meetings
- Presentations

##### **b) Written communication**

- Memos,
- Letters,
- Reports,
- Bulletin board notices,
- Posters,
- E-mails,
- Fax, etc.

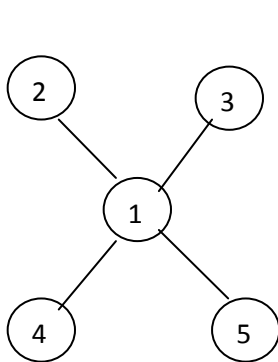
##### **c) Nonverbal communication**

- Facial expressions: smile, frown, eye contact, look, etc
- Vocal qualities: tone, attitude in the voice, silence, etc
- Gestures
- Posture

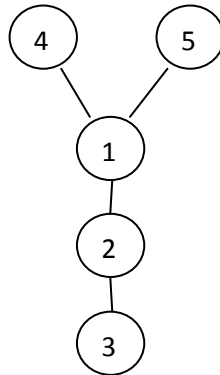
#### **5.1.5. Types of communication networks**

A communication network is a pattern through which the members of group or team communicate. Researchers studying groups dynamics have discovered several typical networks in groups and teams consisting of three, four and five members. Communication networks vary in terms of information flow, position of the leader, and effectiveness for different types of tasks. Five basic networks for five-person groups have been identified by researchers on communication networks: the wheel pattern, the Y pattern, the chain, the circle pattern and the all channel network.

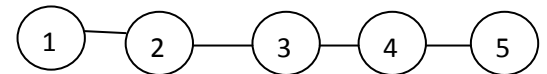
## Basic communication networks



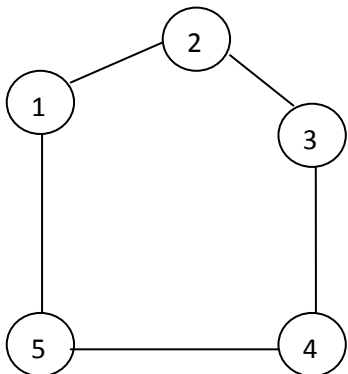
Wheel



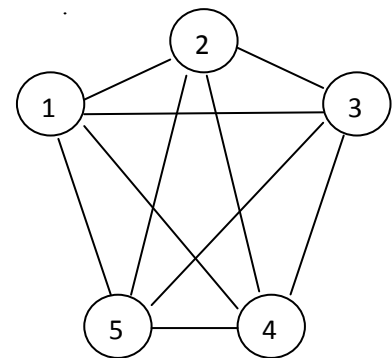
Y



Chain



Circle



All channel

For organizational communication, vertical communication is differentiated from horizontal communication.

- **Vertical communication** is the flow of information both up (upward communication) and down (downward communication) the chain of command. It is often called formal communication because it follows the chain of command and is recognized as official.
- **Horizontal communication** is the flow of information between colleagues and peers. It is often called informal communication because it does not follow the chain of command and is usually not recognized as official.

### **5.1.6. Communication barriers**

Communication barriers include perception, noise, emotions, filtering, trust and credibility, information overload, not listening, time and place, and media selection. When the sender transmits the message, the message is subject to all these communication barriers. When the message goes to the receiver, it is again subject to these same barriers.

When communicating with people from around the globe, cultural differences can cause barriers to communication. Some of the major areas include social conventions, language, etiquette, and politeness, and nonverbal communication.

### **5.1.7. Communication and behavior change**

Behavior change communication (BCC) is an interactive process with communities to develop tailored messages and approaches using a variety of communication channels to develop positive behaviors; promote and sustain individual, community and societal behavior change; and maintain appropriate behaviors. Many health and development programs use behavior change communication (BCC) to improve people's health and wellbeing, including family planning and reproductive health, maternal and child health, and prevention of infectious diseases. BCC is a process that motivates people to adopt and sustain healthy behaviors and lifestyles. Sustaining healthy behavior usually requires a continuing investment in BCC as part of an overall health program.

When you plan behavior change communication (BCC), be sure to tap on local knowledge and cultural practices. Design messages with the community including women, children and youth. This way, you are sure that the messages, materials and methods of dissemination, whether interpersonal, group or mediated, are socio-culturally acceptable. You need to work with partners in mobilizing communities with the essential elements of a BCC and social mobilization initiative.

Information, education and communication (IEC) materials with prepared messages can be conceptualized as part of a communication preparedness plan. You can easily adapt and produce these as part of your BCC program provided messages, design and presentation are duly pre-tested with the intended audience groups. Producing and disseminating IEC materials can be a quick way to reach a large number of people. This form of communication typically leads to "awareness raising" of an issue, and serves to reinforce existing knowledge and practices, such as the importance of hand washing, but this may not necessarily lead to changes in behavior.

IEC materials include radio public service announcements in print form, posters, leaflets, brochures, videos, flip charts, banners, and promotional items like T-shirts and badges.

## 5.2. Health communication

As defined by US Department of Health and Human Services (2005), the scope of health communication in Public Health includes disease prevention, health promotion, health care policy, and the business of health care as well as enhancement of the quality of life and health of individuals within the community. Health communication links the domains of communication and health.

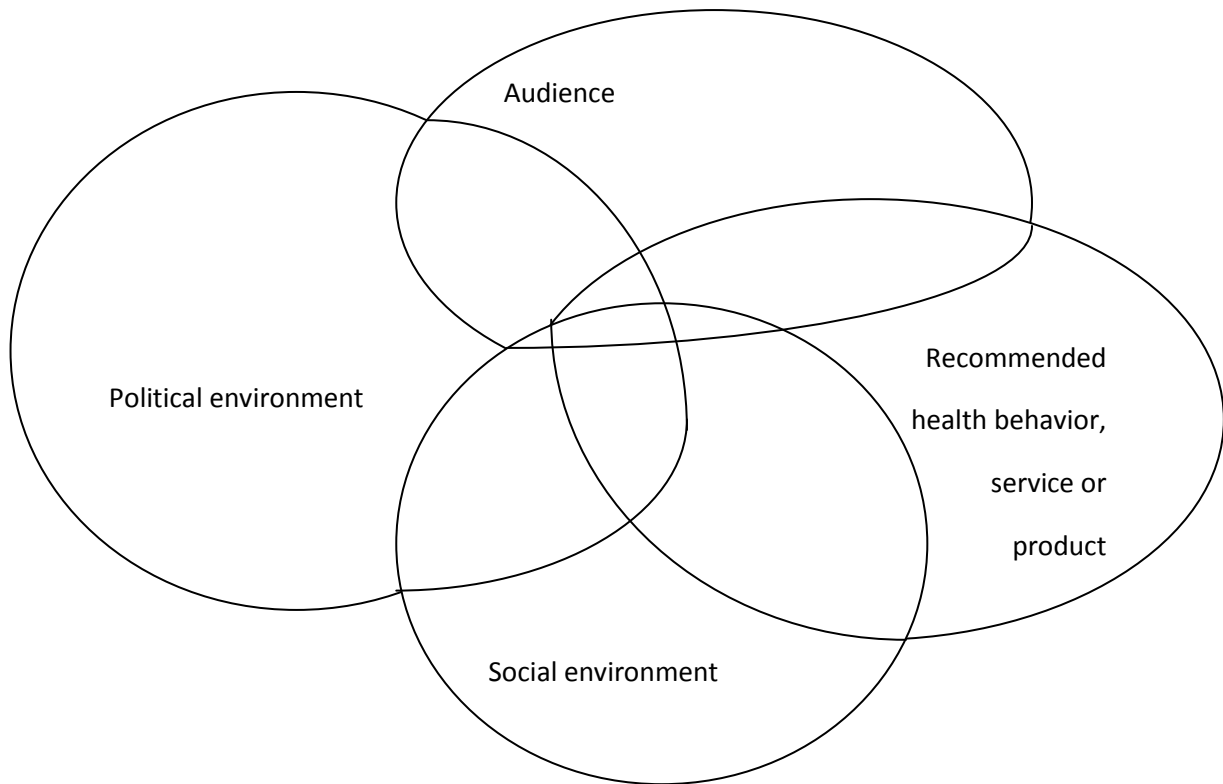
- Health communication is a key strategy to inform the public about health concerns and to maintain important health issues on the public agenda
- Health communication is a process for the development and diffusion of messages to specific audiences in order to influence their knowledge, attitudes and beliefs in favor of healthy behavior choices.
- “Effective health communication is the art and technique of informing, influencing and motivating individuals, institutions, and large public audiences about important health issues based on sound scientific and ethical considerations”.

### 5.2.1. Key characteristics of effective health communication program

1. Audience centered
2. Research-based
3. Multidisciplinary
4. Strategic
5. Process oriented

6. Cost effective
7. Creative in support of strategy
8. Audience and media specific
9. Relationship building
10. Aimed at behavioral or social change

### 5.2.2. Factors influencing effectiveness of health communication programs



#### Audience

- ❖ Health beliefs, attitudes and behaviors
- ❖ Culture, age, and gender related factors
- ❖ Literacy level
- ❖ Risk factors
- ❖ Life style issues

#### Recommended health behavior, service or product

- ❖ Benefits
- ❖ Risks
- ❖ Disadvantages
- ❖ Price of lifestyles
- ❖ Availability and access

#### Political environment

- ❖ Policies, laws
- ❖ Political willingness and commitment
- ❖ Level of priority in political agenda

#### Social environment

- ❖ Stakeholders' beliefs, attitudes, and practices
- ❖ Social norms
- ❖ Social structures
- ❖ Existing initiatives and programs

### 5.2.3. Process of Health Communication program

#### ❖ Stage 1: Planning and strategy development

During stage 1, the plan that will provide the foundation for the program is created. The goal of the first stage can be achieved through 6 steps:

**Step 1:** Assess the health issue or problem and identify all the components of the possible solution

**Step 2:** Define communication objectives

**Step 3:** Define and learn about intended audiences

**Step 4:** Explore settings, channels, and activities best suited to reach intended audience

**Step 5:** Identify potential partners and develop partnering plans

**Step 6:** Develop a communication strategy for each intended audience; draft a communication strategy

**Types of channels:** interpersonal channels, organizational and community channels, mass media channels (newspapers, radio, television, internet).

#### ❖ Stage 2: Developing and pretesting concepts, messages and materials

Steps in developing and pretesting concepts, messages and materials are the following:

Step 1: Review existing materials

- Before you begin developing and producing new materials, determine whether creating them is necessary (! cost & time!)

Step 2: Develop and test message concepts

- Develop culturally appropriate communications
- Choosing appears:
  - positive emotional appeals
  - humorous appeals
  - threat (or fear) appeals

Step 3: Decide what materials to develop

- Common materials are booklets, leaflets, posters, public service announcements, videotapes, etc.

- Material formats depends on the nature of the message (e.g. its complexity, sensitivity, style, etc) and the function of the message (e.g. to call attention to an issue or to teach a new skill)

Most important: make sure that your program's decisions about materials fit with the activities and channels you selected and will contribute to reaching the communication objectives developed in stage 1.

#### Step 4: Develop messages and materials

- Ensure the message is accurate
- Be consistent
- Be clear
- Be relevant to the intended audience
- Be credible
- Be appealing

#### Step 5: Pretest messages and materials

Pretest preproduction draft materials permits to identify flaws before spending money on final production.

- Assess comprehensibility
- Identify strong and weak points
- Determine personal relevance
- Gauge confusing, sensitive, or controversial elements

✚ A review process adds value

### ❖ **Stage 3: Implementing the program**

Main activities to be planed during this stage are the following:

1. Preparing to launch and implement the program
2. Holding a press conference
3. Maintaining media relations after launch
4. Working with the media during a crisis
5. Managing implementation: monitoring and problem solving
6. Maintaining partnerships

## ❖ **Stage 4: Assessing effectiveness and making refinements**

### **1. Outcome evaluation**

Outcome evaluation shows how well the program has met its communication objectives and what you might change or improve to make it more effective.

#### **Steps for outcome evaluation:**

1. Determine what information the evaluation must provide
2. Define the data to collect
3. Decide on data collection methods
4. Develop and pretest data collection instruments
5. Collect data
6. Process data
7. Analyze data to answer the evaluation questions
8. Write an evaluation report
9. Disseminate evaluation report

### **2. Refining health communication program**

The health communication planning process is circular. The end of Stage 4 is not the end of the process but the step that takes you back to Stage 1. You need to review the evaluation report and consider the following to help you identify areas of the program that should be changed, deleted, or augmented:

- Goals and objectives
- Where additional effort may be needed
- Implications of success
- Costs and results of different activities
- Accountability

Once you have decided what needs to be done to improve the program, use the planning guidelines in Stage 1 to help determine new strategies, define expanded or different intended audiences, and rewrite/revise the communication program plan to accommodate new approaches, new tasks, and new timelines. You must review information from the other stages as you plan the next phase of program activities.

## **CHAPTER SIX: RESEARCH METHODS IN SOCIAL AND BEHAVIORAL SCIENCES AND STUDY OF HEALTH PROBLEMS**

### **6.1. Introduction and definition of key concepts**

#### **a) The purpose of social research**

Social research can serve many purposes. Three of the most common and useful purposes are exploration, description and explanation. A given study can have more than one of these purposes.

- Exploratory study occurs when a researcher examines a new interest or when the subject of study itself is relatively new. Exploratory studies are also appropriate for more persistent phenomena. Sometimes exploratory research is pursued through the use of focus groups, or guided small-group discussions. Exploratory studies are most typically done for three purposes:
  - 1) To satisfy the researcher's curiosity and desire for better understanding
  - 2) To test the feasibility of undertaking a more extensive study, and
  - 3) To develop the methods to be employed in any subsequent study
- Descriptive study: many qualitative studies aim primarily at description. An anthropological ethnography, for example, may try to detail the particular culture of some preliterate society. At the same time, such studies are seldom limited to a merely descriptive purpose. Researchers usually go on to examine why the observed patterns exist and what they imply. Descriptive studies answer questions of what, where, when, and how.
- Explanatory study: the purpose of research can be to explain things and to answer explanatory questions of why. Example: identifying variables that explain why some cities higher crime rates than others involves explanation

#### **b) Basic research and applied research**

- Basic research is a research undertaken with no immediate practical application as the goal. All types of data collection are used in basic research: surveys, direct observations, indirect observations, and experiments.
- When the research strategy is to assess the outcomes of projects, programs and policies associated with social interventions, the research is called applied or evaluation research. Experiments,

surveys, personal interviews, and other methods of data collection are used in evaluation research, just as they are in basic research.

### c) **Variable, concept and indicator**

A variable is a way of describing people or objects by assigning a category or a number to each person or object. The people or objects being described are “elements”. Every variable is defined by at least two categories, and every element fits into exactly one of the categories. The value of a variable is the category or number assigned to it for one element.

Variables that are not directly measurable often are called concepts or constructs. Example: self-esteem, intelligence, etc. Because constructs can’t be observed, their measurement depends on indicators. Indicators are observable variables used as indirect measures of a construct. Several indicators often are combined to measure the construct. The assumption is that the unobservable construct “causes” or influences the answers that people give to observed indicators. For example, the state of patients’ health influenced how they responded to the interview questions of self-assessed health and morbidity.

#### Classification of variables

In the social sciences, data analysis for a study depends heavily on the types of measures. Stevens (1946) introduced a classification scheme consisting of four types of variables: **nominal, ordinal, interval, and ratio.**

Variables also may be classified by whether their categories are finite (limited) or infinite. A **discrete variable** is one that either has a finite number of categories, or infinite number whose values correspond to whole numbers. Examples of discrete variables include gender, population size of countries, and number of households’ pets. A **continuous variable** is one whose values correspond to numbers, both whole numbers and parts of numbers. Measures of height and weight are good examples.

## **6.2. Ethics and politics of social research**

Anyone involved in social science research needs to be aware of general agreements shared by researchers about what is proper and improper in the conduct of scientific inquiry. The ethics of social research deals mostly with the methods employed and political issues tend to center on the substance and use of research. In fact, there is probably a political dimension to every attempt to study human social behavior. Although the ethical and political dimensions of research are in

principle distinct, they do intersect. The most important ethical agreements that prevail in social research are the following:

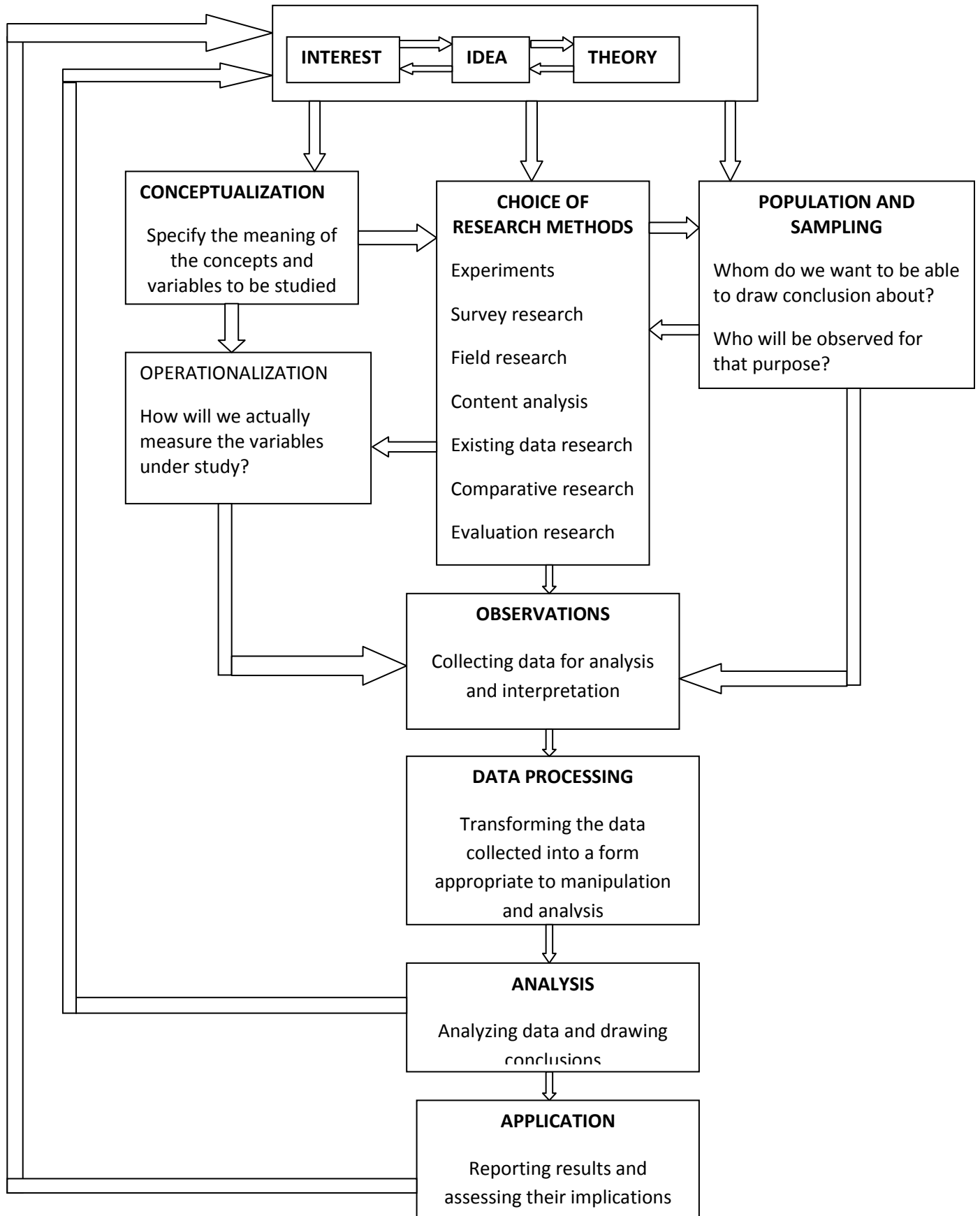
- a) Voluntary participation
- b) No harm to the participants
- c) Anonymity and confidentiality

Social sciences are particularly linked to social life. Social researchers study things that matter to people. Then the intrusion of politics and related ideologies can happen. Moreover, researchers are human beings, and their feelings often surface in their professional lives. Whereas, researchers should not let their values interfere with the quality and honesty of their research.

### **6.3. Research design**

There are many components for the research design. The research design involves a set of decisions regarding what topic is to be studied, among what population, with what research methods for what purpose. In designing a research project it is useful to assess three things: your interests, your abilities and the available resources. Each of these considerations will suggest a large number of possible studies.

**Schematic view of the traditional image of research design**



## **6.4. Writing social research report**

### **6.4.1. Basic considerations**

#### **a) Audience**

Before drafting the report, ask yourself who you hope will read it. Normally, you should make a distinction between scientists and general readers. If the report is written for the former, you can make certain assumptions about their existing knowledge and therefore summarize certain points rather than explain them in detail. Similarly, you can use more technical language than would be appropriate for a general audience. At the same time, remain aware that any science has its factions and cults. Terms, assumptions, and special techniques familiar to your immediate colleagues may confuse other scientists.

#### **b) Form and length of report**

It is useful to think about the variety of reports that might result from a research project. When, you are preparing a short research note for publication in an academic or technical journal or a professional paper, it is different from when you must prepare report for the sponsors of the project. These reports can vary greatly in length.

#### **c) Aim of the report**

In preparing the report, the researcher must keep in mind its purpose: exploration, description, and/or explanation. If the intention is to test a hypothesis based in theory, the researcher should make that hypothesis clear and succinct, and specify what constitute acceptance or rejection of the hypothesis and how either of those reflects on theoretical underpinnings. Finally, some research reports propose action.

### **6.4.2. Organization of the report**

#### **a) Purpose and overview**

It is helpful if you begin with brief statement of the purpose of the study and the main findings of the analysis. This overview sometimes takes the form of an abstract.

**b) Review of the Literature**

After presenting the general purpose of your study, you should bring the reader up-to-date on the previous research in the area, pointing to general agreements and disagreements among the previous researchers. Your review of the literature should lay the groundwork for your own study, showing why your research may have value in the larger scheme of things.

**c) Study design and execution**

The worth of all scientific findings depends heavily on the manner in which the data were collected and analyzed. In reporting the design and execution of a survey, for example, the population, the sampling frame, the sampling method, the sample size, the data collection method, the completion rate, and the methods of data processing and analysis should be included.

**d) Analysis and interpretation**

The presentation of data, the manipulation of those data, and your interpretations should be integrated into a logical whole. Every step in the analysis should make sense at the time it's taken. If you are using quantitative data, present them so that the reader can recompute them. If you are doing a qualitative analysis, you must provide enough detail that your reader has a sense of having made the observations with you. Integrating supporting materials is important. Tables, charts and figures, if any, should be integrated into the text of the report.

**e) Summary and conclusions**

Summarizing the research report is essential. Avoid reviewing every specific finding, but review all significant one, pointing once more to their general significance. The report should conclude with a statement of what you have discovered about your subject matter and where future research might be directed. You should review the particular shortcomings of your own study and suggest ways those shortcomings might be avoided.