Normality and Abnormality
# Block 3

## NORMALITY AND ABNORMALITY

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Expert Committee

Prof. Vimala Veeraraghavan
(Chairperson)
Former Emeritus Professor
Discipline of Psychology
IGNOU, New Delhi

Prof. T. B. Singh
Professor Clinical Psychology
Institute of Behavioural Sciences
University, Gujarat

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Govt. Medical College
Chandigarh

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Mental Hospital Indore

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Medical College, New Delhi

Prof. M. Thirunavakkarasu
President, Indian Psychiatric
Society, Prof. & Head
Dept. of Psychiatry
SRM Medical College
Hospital & Research Center,
Chennai

Dr. Swati Patra
(Programme Coordinator)
Associate Professor
Discipline of Psychology
IGNOU, New Delhi

Course Writers

Dr. Swati Patra
Associate Professor
Discipline of Psychology
SOSS, IGNOU, New Delhi

Course Coordinator

Dr. Smita Gupta
Assistant Professor
Discipline of Psychology
SOSS, IGNOU, New Delhi

Units 1, 2, 3, & 4
Prof. M. Thirunavakkarasu
Prof. & Head, Dept. of Psychiatry
SRM Medical College Hospital & Research Center
Chennai

and

Ms. Preethi Krishnan
Head and Associate Professor
Department of Clinical Psychology
SRM Medical College
SRM University, Chennai

Course Writers

Prof. Pratap Sharan
Professor
Department of Psychiat
AIIMS, New Delhi

and

Dr. Smita Gupta
Assistant Professor
Discipline of Psychology
SOSS, IGNOU, New Delhi

Block Editors

Print Production

Mr. Manjit Singh
Section Officer (Publication)
SOSS, IGNOU, New Delhi

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Block 3 of MPC-051 deals with the aspects of individual’s behaviour. You will come to know about the different criteria on basis of which you can differentiate any behaviour in to normality and abnormality in a cultural context. Mental health and mental illness are like two sides of a coin, that is if a person is mentally healthy, he/she has lesser chances of mental illness.

Thus, in Block 3 of MPC-051, we will be focusing on the various aspects of normality and abnormality.

**Unit 1** deals with “Historical Perspectives of Mental Health”. In the first unit, you will come to know about the existence and treatment of abnormal behaviour historically through various eras. With the help of history you will be explained how each society has struggled to understand and treat psychological problems. Present views and treatment has reflected some of the issues of difficulty in dealing with mental illness or abnormal behaviour in the past.

**Unit 2** is related to “Definition of Normality and Abnormality: Criteria and Measurement”. This unit will deal with the concepts of normality and abnormality and also the causes and symptoms of abnormal behaviour. You might have observed that, even in the normal daily routine at times people might experience distress and behave in an undesirable ways. This shows that any behaviour may depend on the occasion or context. You will come to know how to judge a person as being psychologically disordered.

**Unit 3** is on “ Conative Functions – Normal and Pathological”. In this Unit we will discuss about meaning and definition of conation and certain conative functions. It will also deal with the different phases, modes, impact and measurement of the conative component of mind.

**Unit 4** deals with “Cognitive Functions – Normal and Pathological”. This unit will try to explain you the contribution of cognitive functioning towards human behaviour.
UNIT 1  HISTORICAL PERSPECTIVES OF MENTAL HEALTH

Structure

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1.0  INTRODUCTION

Since psychological abnormality or mental illness has existed in the past and continues to exist in the present. This unit discusses about the existence and treatment of abnormal behaviour historically through various eras. With the help of history we can understand how each society has struggled to understand and treat psychological problems. Present, views and treatment has reflected some of the issues of difficulty in dealing with mental illness or abnormal behaviour in the past.

1.1  OBJECTIVES

With the help of this unit, you will be able:

- to understand the historical perspectives of mental illness;
- to know the evolution of current trends from ancient, middle age and 19th century views of mental illness;
- to know the method (criteria/descriptions) of identifying mental illnesses; and
- to understand the importance of promoting mental health.
1.2 HISTORICAL PERSPECTIVES OF MENTAL ILLNESS

1.2.1 Ancient Views

In the ancient times, any abnormal behaviour shown by an individual was viewed as a product of supernatural forces. It was believed that all such phenomena were a result of the actions of magical, sometimes sinister beings which controlled the world. In particular, ancients viewed the human body and mind as a battleground between external forces of good and evil. Abnormal behaviour was typically interpreted as a victory of evil spirits, and the cure for such behaviour was to force the demons to come out from the victim’s body. This supernatural view of abnormality may have begun as far back as the Stone Age, a half-million years ago. Some skulls from that period recovered in Europe and South America show evidence of an operation called trephination, in which a stone instrument, or trephine, was used to cut away a circular section of the skull. Historians surmise that this operation was performed as a treatment for severe abnormal behaviour—either hallucinations, in which people saw or heard things not actually present, or melancholia, characterized by extreme sadness and immobility. The purpose of opening the skull was to release the evil spirits that were supposedly causing the problem.

However, this assumption is debatable as some scholars believe that trephination may instead have been used to remove bone splinters or blood clots caused by stone weapons during tribal warfare. Whether this method was used for treating abnormal behaviour or for removing clots, it is known that later societies clearly did attribute abnormal behaviour to possession by demons. Egyptian, Chinese, and Hebrew writings all account for psychological deviance this way. The treatment for abnormality in these early societies was often exorcism. The idea was to coax the evil spirits to leave or to make the person’s body an uncomfortable place in which to live. A shaman, or priest, would recite prayers, plead with the evil spirits, insult them, perform magic, make loud noises, or have the person drink bitter portions. If these techniques failed, the shaman performed a more extreme form of exorcism, such as whipping or starving the person.

1.2.2 Greek and Roman Views

Over the centuries, the way in which abnormal behaviour was understood and explained changed. The naturalist approach to understanding abnormal behaviour dates back to the observations and records of Ancient Greek
physician Hippocrates. In the years from roughly 500 B.C. to A.D. 500, in the flourishing Greek and Roman civilizations, philosophers and physicians identified a number of mental disorders. The most prominent conditions identified by these philosophers and physicians were: melancholia which is a condition marked by unshakable sadness; mania which is a state of euphoria and frenzied activity; dementia which is a general intellectual decline; hysteria which is the presence of a physical ailment with no apparent physical cause; delusions which are idiosyncratic beliefs that are firmly held without adequate basis; and hallucinations that are the experience of imagined sights or sounds as if they were real. Although demonological interpretations of mental and physical illness were still widespread, philosophers and physicians began to offer alternative explanations during this period. Therefore there was clear cut commonality in the identified abnormal behaviour then and in the present era.

Hippocrates (460–377 B.C.), often called the father of modern medicine, taught propagated that illnesses had natural causes. He saw abnormal behaviour as a disease arising from internal physical problems. Specifically, he believed that some form of brain pathology was the cause and that resulted—like all other forms of disease, in his view—from an imbalance of four fluids, or humors, that flowed through the body: yellow bile, black bile, blood, and phlegm. An excess of yellow bile, for example, caused mania; an excess of black bile was the source of melancholia. To treat psychological dysfunction, Hippocrates sought to correct the underlying physical pathology. He believed, for instance, that the excess of black bile underlying melancholia could be reduced by a quiet life, a vegetable diet, temperance, exercise, celibacy, and even bleeding. Hippocrates’ His focus on internal causes for abnormal behaviour was shared by the great Greek philosophers Plato (427–347 B.C.) and Aristotle (384–322 B.C.) and by other influential Greek and Roman physicians. Mental disturbance were noted and theories of abnormal behaviour developed. The reason behind such disturbances was supposed to be caused by biological factors.

1.2.3 Middle Ages

In the middle ages, the explanations towards any kind of abnormal behaviour shown by individuals were guided by supernatural beliefs only. The enlightened views of Greek and Roman physicians and scholars did not prevent ordinary people from continuing to believe in demons. And with the decline of Rome, demonology enjoyed a strong resurgence, as a growing distrust of science spread throughout Europe. From A.D. 500 to 1350, the period known as the Middle Ages, the power of the clergy increased greatly throughout Europe. In those days the church rejected scientific forms of investigation, and it controlled all education. Religious beliefs, which were highly superstitious and demonological and it dominated almost all aspects of life. Once again, the abnormal behaviour was as usual interpreted as a conflict between good and evil, God and the devil. Deviant behaviour, particularly psychological dysfunction, was seen as evidence of Satan’s influence. Although some scientists and physicians still insisted on medical explanations and treatments, their views carried little weight in this atmosphere. The Middle Ages were a time of great stress and anxiety, of war, urban uprisings, and plagues. People blamed the devil for these troubles and feared being possessed by them. The incidence of abnormal behaviour apparently increased dramatically during this period. In addition, there were outbreaks of mass ‘madness,’ in which large numbers of people apparently shared delusions and hallucinations.
Normality and Abnormality

Studies reflect that amongst them, in one such disorder, tarantism (also known historically as St. Vitus’s dance), groups of people would suddenly start to jump, dance, and go into convulsions. Some dressed oddly; others tore off their clothing. All were convinced that they had been bitten and possessed by a wolf spider, called a tarantula, and they sought to cure their disorder by performing a dance called a tarantella. In another form of mass ‘madness,’ lycanthropy, people thought they were possessed by wolves or other animals. They acted wolf-like and imagined that fur was growing all over their bodies. Stories of lycanthropes, more popularly known as were wolves, have been passed down to us and continue to fire the imagination of writers, moviemakers, and their audiences. Not surprisingly, some of the earlier demonological treatments for psychological abnormality re-emerged during the Middle Ages. Like the ancient times, it was again thought that the best possible way to cure such abnormal behaviour was to get the person’s body rid from the devil that possessed it. Exorcisms were revived, and clergymen, who generally were in charge of treatment during this period, would plead, chant, or pray to the devil or evil spirit. If these techniques did not work, they had others to try, some indistinguishable from torture like activities.

Anyhow, with the advent of development and changes, these methods began to lose favor. Towns throughout Europe grew into cities, and municipal authorities gained more power and took over nonreligious activities. Among their other responsibilities, they began to run hospitals and direct the care of people suffering from mental disorders. During these same years, many people with psychological disturbances received treatment in medical hospitals.

1.2.4 The Nineteenth Century

Thus, gradually abnormal behaviour was seen as an illness and in the 18th and 19th century, hospitalization of those who were mentally disturbed became common. The conditions of these hospitals and asylums were usually degrading and cruel. Late in the eighteenth century Philippe Pinel and William Tuke were pioneers in bringing about reform in these institutes. Their approach came to be known as moral therapy. They stressed on the need for peaceful environments for these institutes, need to provide useful work to the patients and the need to provide dignified treatment. In the 19th century Dorothy Dix and others were responsible for development of more number of humane hospitals and institutions. However, the reformers could not find the expected results because many of the patients were kept in hospitals primarily for custodial care. The conditions deteriorated in the hospitals and institutions because of lack of personnel to cater to the large number of patients.

1.2.5 The Early Twentieth Century

The view of mental illness in 19th Century was declining by the late 1800s, when two opposing perspectives emerged and began to vie for the attention of clinicians: the somatogenic perspective, the view that abnormal psychological functioning has physical causes, and the psychogenic perspective, the view that the chief causes of abnormal functioning are psychological. These perspectives came into full bloom during the twentieth century.

1.2.5.1 The Somatogenic Perspective

The somatogenic perspective was based on Hippocrates’ view that abnormal behaviour resulted from brain disease and an imbalance of humors. One of the factors that were responsible for this new beginning was the work of an
eminent German researcher, Emil Kraepelin (1856–1926). In 1883 Kraepelin published an influential textbook which argued that physical factors, such as fatigue, are responsible for mental dysfunction. He identified various syndromes, or clusters of symptoms; listed their physical causes; and discussed their expected course. Kraepelin also measured the effects of various drugs on abnormal behaviour. New biological discoveries also triggered the rise of the somatogenic perspective. By the 1950s, a number of effective medications were finally discovered, by this time, the somatogenic perspective truly begin to pay off for patients.

1.2.5.2 The Psychogenic Perspective

The late nineteenth century also saw a parallel emergence of the somatogenic approach, called the psychogenic perspective. The psychogenic perspective viewed that the chief causes of abnormal functioning are often psychological. This view, too, had a long history. The Roman statesman and orator Cicero (106–43 B.C.) opined that psychological disturbances could cause bodily ailments, and the Greek physician Galen believed that many mental disorders are caused by fear, disappointment in love, and other psychological events. However, the psychogenic perspective did not gain much importance until studies of hypnotism demonstrated its potential. It was used to help treat psychological disorders as far back as 1778, when an Austrian physician named Friedrich Anton Mesmer (1734–1815) established a clinic in Paris. His patients suffered from hysterical disorders, mysterious bodily ailments that had no apparent physical basis. A surprising number of patients seemed to be helped by this treatment, called mesmerism. The treatment was so controversial; however, that eventually Mesmer was exiled from Paris.

Among those who studied the effects of hypnotism on hysterical disorders was Josef Breuer (1842–1925) of Vienna. This physician discovered that his patients sometimes awoke free of hysterical symptoms after speaking candidly under hypnosis about past upsetting events. During the 1890s Breuer was joined in his work by another Viennese physician, Sigmund Freud (1856–1939). Freud’s work eventually led him to develop the theory of psychoanalysis, which holds that many forms of abnormal and normal psychological functioning are psychogenic. In particular, he believed that unconscious psychological processes are at the root of such functioning.

Self Assessment Questions 1

Fill in the blanks:

1) In a disorder, called ......................... (also known historically as St. Vitus’s dance), groups of people would suddenly start to jump, dance, and go into convulsions.

2) ............................ and .................................. were pioneers in bringing about reform in the hospitals and asylums.

3) The somatogenic perspective views ............................... and the psychogenic perspective views ..............................

4) In the middle ages, the explanations towards any kind of abnormal behaviour shown by individuals were guided by ......................... only.
1.3 HISTORICAL PERSPECTIVE OF MENTAL HEALTH

With changes in views towards abnormal behaviours and mental disturbances, attempts towards contributing sound mental health started getting importance. One of the initial attempts to define mental health took place in 1941 in the United States. John Clausen and his coworkers were commissioned to assess mental health for the draft board, as part of the Selective Training Act for enlistment of young men into the United States army. To assess the mental health of recruits, the board focused on the absence of psychosomatic symptoms. This approach of defining mental health was followed till the 1970’s; wherein, the absence of psychopathology was considered as synonymous with normal. After the end of the world war, certain changes in the procedure for assessment of mental health were seen. At the end of world war, the normal adaptive behaviour of those who served in the army was studied and the observations were published in scientific literature. Important studies focused on the adaptation of non patients from the army into civilian life. It was Marie Johoda who brought a major change in the conceptualization of mental health in 1958. In her model, she proposed that the criteria for assessing mental health should focus on positive aspects of mental health, rather than on absence of symptoms of mental illness. According to her, an individual can be considered to be mentally healthy only if he/she is in touch with his/her identity and feelings, they should be oriented towards the future and overtime they should be fruitfully invested in life, their psyche should be integrated and provide them resistance to stress, they should possess autonomy and recognize what suits their needs, they should perceive reality without distortion and yet possess empathy and they should be master of their environment. They should able to work, love and play and be efficient in problem-solving.

More recently, Carol Ryff and her colleagues repeated Jahoda’s analysis by surveying and integrating what different theorists/clinicians said about the psychological components of being and doing well—striving and thriving, as it were. They identified six points of convergence across discussions of psychological well-being, which agree substantially with those specified decades earlier by Jahoda:

- Autonomy
- Environmental mastery
- Personal growth
- Positive relations with others
- Purpose in life
- Self-acceptance

Moreover, Ryff and her colleagues created reliable and valid self-report surveys of these components of psychological well-being. Using these measures, they explored the links between psychological well-being and physical health, by finding positive associations and implicating the left prefrontal cortex to aid in the organization of goal-directed activity.

Another contemporary positive psychologist who developed Jahoda’s earlier work is Corey Keyes. Keyes stated that the two dimensions- (mental health) and (mental illness) are two separate and distinguishable components. Keyes
explained the concept of complete mental health is as psychological well-being along with the absence of signs and symptoms of psychological disorder. While a condition of complete mental illness is defined by signs and symptoms of psychological disorder along with the absence of psychological well-being.

Other important longitudinal studies showed that mental health characteristics were predictable and that mental health can be empirically studied. Eventually, the importance of defining mental health has been increasingly recognized and attempts have been made to continue to describe and define mental health. An international body known as American Psychiatric Association has been actively involved in this field. It is also involved in categorising Psychological disorders on basis of its symptoms, causes and effects. It regulates a Diagnostic Statistical Manual (DSM) which provides a list of such disorders. The DSM IV TR is the classification system of mental disorders published by American Psychiatric Association which uses the Global Assessment of Functioning, on one of its axes, to measure “above average” mental health.

1.3.1 DSM IV TR

This system involves assessing five areas of an individual’s functioning so that the treatment can be planned accordingly and the course of the disorder can be predicted. The DSM comprises of five axes:

Axis I: Clinical disorders and other conditions that may be a focus of clinical attention

This axis is used for listing the various forms of abnormality, that is, the clinical syndromes or disorders with the exception of the personality disorders and mental retardation, such as schizophrenia, the different types of anxiety disorders, such as social phobia, specific phobia, generalised anxiety disorder, obsessive compulsive disorder, etc. If an individual has more than one Axis I disorder, all should be reported with the primary reason for the visit being listed first.

Axis II: Personality disorders and mental retardation

All the personality disorders like paranoid personality disorder, narcissistic personality disorder, etc., and mental retardation are reported on Axis II. Maladaptive personality features or excessive use of defense mechanisms can also be mentioned here. This axis ensures that the unhealthy personality characteristics and mental retardation will be taken into account while attending to the primary complaint.

Axis III: General medical conditions

This axis is for reporting the general medical conditions that are important in understanding an individual’s mental disorder. General medical conditions may be related to the mental disorders in several ways. In some cases they may play a role in the development of an Axis I disorder, for example, hypothyroidism may lead to depressive symptoms in some or an individual may develop an adjustment disorder as a reaction to the diagnosis of brain tumour. In certain cases medical conditions may influence the treatment of the Axis I disorder, for instance, a person’s heart disease may influence the clinician’s choice of medicines for this patient’s depression.
**Axis IV: Psychosocial and environmental problems**

The psychosocial and environmental problems that influence the diagnosis, treatment and prognosis (future course) of mental disorders listed on Axis I and/or II are reported on this axis. This includes a negative life event, interpersonal stresses, lack of social support, etc. These problems may influence the development or treatment of mental disorders or may develop as a result of the Axis I/II condition.

**Axis V: Global assessment of functioning**

This axis is for reporting the clinician’s judgement of the individual’s overall functioning, which is useful in treatment planning or predicting its outcome. The Global Assessment of Functioning (GAF) scale is used to rate the individual’s psychological, social and occupational functioning. For example, a score of 100 means superior functioning with no symptoms, while a score of 50 indicates serious symptoms.

1.3.1.1 **Global Assessment of Functioning (GAF scale)** – the scale range and its interpretation may be mentioned as follows:

91 – 100 - Superior functioning in a wide range of activities, life’s problems never seem to get out of hand, is sought out by others because of his or her many positive qualities. No symptoms.

81 – 90 - Absent or minimal symptoms (e.g., mild anxiety before an exam), good functioning in all areas, interested and involved in a wide range of activities, socially effective, generally satisfied with life, no more than everyday problems or concerns (e.g., an occasional argument with family members).

71 – 80 - If symptoms are present, they are transient and expectable reactions to psychosocial stressors (e.g., difficulty concentrating after family argument); no more than slight impairment in social, occupational, or school functioning (e.g., temporarily falling behind in school work).

61 – 70 - Some mild symptoms (e.g., depressed mood and mild insomnia) OR some difficulty in social, occupational, or school functioning (e.g., occasional truancy or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.

51 – 60 - Moderate symptoms (e.g., flat affect and circumstantial speech, occasional panic attacks) OR moderate difficulty in social, occupational, or school functioning (e.g., occasional truancy or theft within the household), but generally functioning pretty well, has some meaningful interpersonal relationships.

41 – 50 - Severe symptoms (e.g., suicidal ideation, severe obsessional rituals, frequent shoplifting) OR any serious impairment in social, occupational or school functioning (e.g., no friends, unable to keep a job).

31 – 40 - Some impairment in reality testing or communication (e.g., speech is at times illogical, obscure, or irrelevant) OR major impairment in several areas, such as work or school, family relations, judgment, thinking, or mood (e.g., depressed man avoids friends, neglects family, and is unable to work; child frequently beats up younger children, is defiant at home, and is failing at school).

21 – 30 - Behaviour is considerably influenced by delusions or hallucinations OR serious impairment in communication or judgment (e.g., sometimes incoherent, acts grossly inappropriately, suicidal preoccupation) OR inability
to function in almost all areas (e.g., stays in bed all day, no job, home, or friends).

11 – 20 - Some danger of hurting self or others (e.g., suicidal attempts without clear expectation of death; frequently violent; manic excitement) OR occasionally fails to maintain minimal personal hygiene (e.g., smears feces) OR gross impairment in communication (e.g., largely incoherent or mute).

1 – 10 - Persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death.

0 - Inadequate information.

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<tr>
<td>State whether the following statements are ‘True’ or ‘False’:</td>
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<tr>
<td>1) Axis I is used for listing the various forms of abnormality, that is, the clinical syndromes or disorders with the exception of the personality disorders and mental retardation ..................................</td>
</tr>
<tr>
<td>2) It was John Clausen who brought a major change in the conceptualization of mental health in 1958 .........................</td>
</tr>
<tr>
<td>3) DSM (IV) TR involves assessing seven areas of an individual’s functioning so that the treatment can be planned accordingly and the course of the disorder can be predicted ..................</td>
</tr>
<tr>
<td>4) Keyes stated that the two dimensions—(mental health) and (mental illness) are two separate and distinguishable components ........... ..............</td>
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1.3.2 A Growing Emphasis on Preventing Disorders and Promoting Mental Health

After the consideration of mental health, an emphasis was given towards preventing individuals from disorders and promoting individuals’ mental health and well being. The process of prevention programmes began after the 1960’s. Primary prevention programmes attempted to enhance the resilience or the ability to cope with stressful environment. Later on with the emergence and growth in the field of positive psychology the prevention programs focussed on promoting and preventing strategies. Positive psychology is the study and enhancement of positive feelings such as optimism and happiness. It recognizes and encourages positive traits like perseverance and wisdom. It focuses on strengthening positive abilities such as interpersonal skill and other talents. Finally, it promotes group-directed virtues (community support system), and promotes altruistic deeds and tolerance.

In the clinical arena, positive psychology suggests that practitioners can help people best by promoting positive development and psychological wellness. While researchers study and learn more about positive psychology in the laboratory, a growing number of clinicians are already beginning to apply its principles in their work. Studies show that the positive psychologists are teaching people coping skills that may help protect them from stress and adversity and encouraging them to become more involved in personally...
meaningful activities and relationships. Thus, it can be observed that there is increased focus on promoting mental health proactively, preventing mental disorders by addressing the risks factors.

1.4 LET US SUM UP

The above discussion shows a swift in thought of individuals towards the abnormal behaviour. Historically, abnormal behaviour has been viewed as a product of supernatural forces. Over the centuries, the way in which abnormal behaviour was understood and explained also changed. The naturalist approach to understanding abnormal behaviour dates back to the observations and records of Ancient Greece physician Hippocrates. Mental disturbance were noted and theories of abnormal behaviour developed. These disturbances were believed to be caused by biological factors. In the middle ages, supernatural explanations again surfaced and dominated concepts about abnormal behaviour. However, gradually abnormal behaviour was seen as an illness and in the 18th and 19th century, hospitalization of those who were mentally disturbed became common. But the patients were treated in an unkind manner. Late in the eighteenth century Philippe Pinel and William Tuke started the moral therapy to change the condition. Unfortunately, the moral treatment movement disintegrated by the late nineteenth century, and mental hospitals again became warehouses where the inmates received minimal care.

In the 19th century two opposing perspectives emerged - somatogenic perspective, the view that abnormal psychological functioning is caused primarily by physical factors and psychogenic perspective, the view that the chief causes of abnormal functioning are psychological. An important factor in the rise of the latter was the use of hypnotism to treat patients with hysterical disorders. Sigmund Freud's psychogenic approach, psychoanalysis, eventually gained wide acceptance and influenced future generations of clinicians.

Initially mental health was equalized with the absence of psychopathology. Later, after the world war the view of mental health changed gradually, and in 1958, Marie Johoda gave the criteria for assessing mental health. Her model emphasized on looking at the positive aspects of mental health rather than simply the absence of symptoms of mental illness. Vaillant suggested that mental health should be broadly defined; and that it should be based on fundamental premise of cultural sensitivity and it should be empirically and longitudinally validated.

The process of development of prevention programmes began after the 1960’s. Primary prevention programmes attempted to enhance the resilience or the ability to cope with stressful environments.

1.5 UNIT END QUESTIONS

1) Write about the ancient views of mental illness.

2) Describe the biological explanation of mental illness given by Hippocrates.

3) Write about somatogenic and psychogenic perspectives.

4) What are the criteria that were given by Marie Jahoda to assess mental health?
5) How do the current concepts of mental illness differ from ancient views?

6) Write about the importance of promoting mental health.

1.6 ANSWERS TO SELF ASSESSMENT QUESTIONS

Self Assessment Questions 1

1) tarantism

2) Philippe Pinel and William Tuke

3) The somatogenic perspective views that abnormal psychological functioning has physical causes, and the psychogenic perspective views that the chief causes of abnormal functioning are psychological.

4) Supernatural beliefs

Self Assessment Questions 2

1) True

2) False

3) False

4) True

1.7 REFERENCES


UNIT 2  DEFINITION OF NORMALITY AND ABNORMALITY: CRITERIA AND MEASUREMENT

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2.5  A Combined Standard

2.6  Problems in Characterizing Abnormal Behaviour

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2.8  Let Us Sum Up

2.9  Unit End Questions

2.10 Answers to Self Assessment Questions

2.11 References

2.0  INTRODUCTION

The previous unit attempted to explain you the concept and origin of abnormality. Now, the question that might have struck your mind may be what exactly can be categorised in to abnormal and normal behaviour? In reality it is difficult to draw a line that separates normal from abnormal behaviour. The present unit will try to simplify the concepts of normality and abnormality and also the causes and symptoms of abnormal behaviour. Even in the normal daily routine at times people might experience distress and behave in an undesirable ways. Behaviour may depend on the occasion or context. However, to judge a person as being psychologically disordered requires that the
behaviour has to be extremely deviant, maladaptive or distressing and problematic for others as well.

Normality has been defined as patterns of behaviour or personality traits that are typical or conform to some standard of proper and acceptable ways of behaving and being. There have been several attempts taken to define abnormality based on which some criteria can be drawn as to from which point can the phenomena of psychological abnormality be explored. Most of the definitions have certain features in common, called “the four D’s”: deviance, distress, dysfunction, and danger. That is, patterns of psychological abnormality are typically deviant (different, extreme, unusual, perhaps even bizarre); distressing (unpleasant and upsetting to the person); dysfunctional (interfering with the person’s ability to conduct daily activities in a constructive way); and possibly dangerous.

2.1 OBJECTIVES

With the help of the present unit, you will be able to:

- understand the concept of normality;
- understand the definition and concept of abnormality;
- understand the difficulties in diagnosing abnormal behaviour; and
- understand the reason or causal factors leading to abnormal behaviour.

2.2 DEFINITION OF NORMALITY: CRITERIA AND MEASUREMENT

It is really difficult and challenging to define the concept of normality in comparison to abnormality, but there are certain characteristics which when possessed by a normal individual, reflects emotional well being. The following are the traits that a normal person possesses to a greater degree than an individual who is diagnosed as abnormal.

- Appropriate perception of reality
- Ability to exercise voluntary control over behaviour
- Self-esteem and acceptance
- Ability to form affectionate relationships
- Productivity

The WHO considers normality to be a state of complete physical, mental and social well-being.

2.2.1 Functional Perspectives of Normality

Daniel Offer and Melvin Sabshin described four basic perspectives of normality:

- Normality as health – This is basically the traditional medical psychiatric approach to health and illness. Physicians tend to see health as normality. Therefore, normal behaviour (no psychopathology is apparent) is assumed to reflect mental health. So, normal behaviour is considered to be what
Normality and Abnormality

is typical and acceptable. A behaviour can be described as typical and acceptable if the person has sound judgment based on cultural and societal values (which therefore can differ and from time to time). For example, the view of psychiatry on homosexuality has changed from earlier views. The views have changed because of cultural norms, societal expectations and values, professional biases, individual differences and political climate.

- **Normality as utopia** – As an alternative to defining normality in statistical terms as what is average or typical, normality defined as an ideal refers to a state of perfection that people desire to reach, but seldom attain. Calling attention to the potential for people to become more than what they are, the ideal perspective on normality encourages striving toward self-improvement and the active pursuit of greater happiness and success. However, this concept provides little help in separating normal from abnormal groups of people for clinical or research purposes, as their no one can not say who would need professional mental health assistance.

- **Normality as average** – As explained, the third perspective, which is very frequently used in normative studies of behaviour, is based on a mathematical principle of bell shaped curve. According to this approach, people who fall in the middle range are considered as normal and those who fall on both the extremes are deviant. This approach is based on a statistical principle which evaluates individual in terms of general assessment and total score. According to the principle, an individual will be considered to be normal if he/she resembles the typical or most common behaviours as being normal for the group to which he/she belongs and will come under normality.

- **Normality as process** – This perspective stresses that normal behaviour is the end-result of interacting systems. In other words, the normality-as-process perspective stresses changes or processes rather than a cross-sectional definition of normality. Erick Erickson’s personality development theory is an example of this concept (Sadock & Sadock, 2007).

### 2.2.2 Psychoanalytic Theories of Normality

Freud believed that “normality is an idealized fiction.” By this he meant that absolute normality cannot be obtained because a normal person must be totally aware of his or her thoughts and feelings. Melanie Klein’s view of normality was that it was characterized by strength of character, the capacity to deal with conflicting emotions, the ability to experience pleasure without conflict, and the ability to love.

Erik Erikson believed that normality is the ability to master the periods/stages of life: trust vs. mistrust; autonomy vs. shame and doubt; initiative vs. guilt; industry vs. inferiority; identity vs. role confusion; intimacy vs. isolation; generativity vs. stagnation; and ego integrity vs. despair.

According to Adler the person’s capacity to develop social feeling and to be productive is related to mental health and the ability to work heightens self-esteem and makes one capable of adaptation.

The psychoanalyst Heinz Hartmann conceptualized normality by describing the autonomous functions of the ego. These are psychological capacities present at birth that are conflict free, that is, uninfluenced by the internal psychic
world. They include perception, intuition, comprehension, thinking, language, and certain aspects of motor development, learning, and intelligence. In other words some people would be able to lead normal life as they have the special ability to be not vulnerable or overcome stresses and strains of life without the internal psyche being affected.

Karl Jaspers (1883-1969), the German psychiatrist and philosopher, described a personal world—the way a person thinks or feels that could be either normal or abnormal. According to Jaspers, the personal world is abnormal when it (1) springs from a condition that is recognized universally as abnormal, such as schizophrenia; (2) separates the person from others emotionally; and (3) does not provide the person with a sense of spiritual and material security.

Thus, psychoanalyst believed that normality was more an exception than a rule.

### Self Assessment Questions 1

State whether the following statements are ‘True’ or ‘False’:

1) Erik Erikson believed that abnormality is the ability to master the periods/stages of life ......................... .

2) According to principle of bell shaped curve, people who fall in the middle range are considered as normal and those who fall on both the extremes are deviant ......................... .

3) Normality has been defined as patterns of behaviour or personality traits that are typical or conform to some standard of proper and acceptable ways of behaving and being ......................... .

4) Freud believed that absolute normality can be obtained because a normal person might not be totally aware of his or her thoughts and feelings.

### 2.3 ABNORMALITY: CRITERIA AND MEASUREMENT

#### 2.3.1 Psychological Norms

Abnormal psychological functioning is deviant when behaviours, thoughts, and emotions are different from those that are considered normal in a particular place and time. For example, people are not expected to cry themselves to sleep every night, wish themselves dead, or obey voices that no one else hears. In short, behaviour, thoughts, and emotions are deemed abnormal when they violate a society’s ideas about proper functioning.

The term abnormal exactly means “away from normal”. Thus, abnormal behaviour is statistically deviant or infrequent. From the statistical point of view, abnormality is any substantial deviation from statistically calculated average. This makes the task simple as it simply measures a person’s performance based on the average performance of the group. Those that fall out of the average range are considered abnormal. Diagnosing a person as mentally retarded is based on this categorization. This involves no values or what is desirable or undesirable but just facts. This could cause some...
misunderstanding as those who are above the normal range can be considered as deviant or needing psychological treatment. For example, these criteria do not help to distinguish between atypical behaviour which is desirable and acceptable, and behaviours which are undesirable and unacceptable.

2.3.1.1 Social and Cultural Norms

There are certain standards or norms are set for behaviours to be called as normal and those behaviours which deviate markedly from the norm are conceived as abnormal or atypical. Thus, the ideas of normality differ from one society to another and over time within the same society. Each society establishes norms. These norms can be explicit rules (clearly defined) and implicit (understood only indirectly) rules for proper conduct.

Judgments of abnormality vary from society to society. A society’s norms grow from its particular culture—its history, values, institutions, habits, skills, technology, and arts. It should be clear to you by now that, each culture has its own rules telling what is right and what is wrong for acceptable behaviour. Attention to typical patterns of behaviour also promotes cultural sensitivity. Developing sensitivity towards culture is very important in order to understand any behaviour. Therefore, in order to categorise a behaviour of an individual to be normal, it is very necessary to consider the cultural context to which he/she belongs. This behaviour depends in parts, on the attitudes and behaviour patterns that are valued in the groups to which the person belongs. Understanding normal behaviour in relation to the customs, traditions and expectations of the sociocultural context helps in recognizing disturbed behaviour from that which may seem strange but adaptive in that particular culture. For example, a society that values competition and assertiveness may accept aggressive behaviour, whereas one that emphasizes cooperation and gentleness may consider aggressive behaviour unacceptable and even abnormal.

A society’s values may also change over time, causing its views of what is psychologically abnormal to change as well. For example, some decades ago, homosexuality was considered as deviant and unacceptable, however, now it is accepted by the psychiatric community as normal (not deviant). American society, today to a large extent, accepts marriages between same-sex couples.

2.3.1.2 Legal Norms

A persons’ behaviour is termed as ‘crime’, if he/she violates legal norms. Harmful behaviour towards oneself may fall out of the limits of legal norms. Legal norms may differ from culture to culture, or differ based on religious backgrounds.

2.3.1.3 Specific Circumstances

Judgments of abnormality depend on specific circumstances as well as on cultural norms. For example, if someone is extremely fearful of an impending danger and shows distress and is unable to function on a day to day basis, after experiencing a severe trauma, then it can be inferred that his or her reaction is a normal reaction to an abnormal situation. Many painful human experiences produce intense reactions.

2.3.2 Distress

Some people who function abnormally maintain a positive frame of mind. For example, if a person had a delusion of grandiosity, that is, if someone believed
that he has been bestowed with special powers, then the reported subjective feelings of the person will certainly not be one of distress. So, the question is then whether the criteria of distress for diagnosing abnormal behaviour are adequate. It should be considered as criteria only based on the overall observation of the behaviour.

### 2.3.3 Dysfunction

Abnormal behaviour tends to be *dysfunctional*; that is, it interferes with daily functioning or normal routine. Mental illness upsets, distracts, or confuses people so much that they cannot care for themselves properly, participate in ordinary social interactions, or work productively. For example, someone has to quit his/her job, leave his/her family, and withdraw from the productive life he/she once led. This behaviour can be considered abnormal if the person has no other means of financial support.

However, the concept of ‘functioning’ is not clear, as some behaviors that can cause ‘failure to function’ are not seen as bad, i.e. firemen risking their lives to save people in a blazing fire or Mahatma Gandhi or his followers going on hunger strikes to procure social justice.

Then again, dysfunction alone does not necessarily indicate psychological abnormality. Mahatma Gandhi and his followers, for example, went on a fast or in other ways deprived themselves of things they needed as a means of protesting social injustice. Far from receiving a clinical label of some kind, they are widely viewed as admirable people—caring, sacrificing, even heroic.

### 2.3.4 Danger

It is the ultimate or critical factor of psychological dysfunctioning. It is very essential to judge whether a behaviour is *dangerous* to self or others. Individuals whose behaviour is consistently careless, hostile, or confused may be placing themselves or those around them at risk. Although danger is often cited as a feature of abnormal psychological functioning, research suggests that it is actually the exception rather than the rule. Despite popular misconceptions, most people struggling with anxiety, depression, and even bizarre thinking pose no immediate danger to themselves or to anyone else.

### 2.4 THE ELUSIVE NATURE OF ABNORMALITY

Till here, it must be clear to you that if you want to understand the concept of abnormality you need to consider the concerned social norms and values. Ultimately, each society selects general criteria for defining abnormality and then uses those criteria to judge particular cases. Noting society’s role in this process, one clinical theorist, Thomas Szasz (2000, 1997, 1970), argues that the whole concept of mental illness is invalid, a myth of sorts. According to Szasz, the deviations that society calls abnormal are simply “problems in living,” not signs of something wrong within the person. Societies invent the concept of mental illness so that they can better control or change people whose unusual patterns of functioning upset or threaten the social order.

Even if we assume that psychological abnormality is a valid concept and that it can indeed be defined, we may be unable to apply our definition consistently. If a behaviour (e.g. excessive use of alcohol among college students) is familiar
enough, the society may fail to recognize that it is deviant, distressful, dysfunctional, and dangerous. Many college students may be so dependent on alcohol that it interferes with their personal and academic lives, causes them great discomfort, jeopardizes their health, and often endangers them and the people around them. Yet their problem often goes unnoticed, certainly undiagnosed, by college administrators, other students, and health professionals. Alcohol is so much a part of the college subculture that it is easy to overlook drinking behaviour that has become abnormal. Conversely, a society may have trouble distinguishing between an abnormality that requires intervention and an eccentricity, or marked individuality, with which others have no right to interfere. From time to time we see or hear about people who behave in ways we consider strange, such as a man who lives alone with two dozen cats and rarely talks to other people. The behaviour of such people is deviant, and it may well be distressful and dysfunctional, yet many professionals think of it as eccentric rather than abnormal.

In short, while we may agree to define psychological abnormalities as patterns of functioning that are deviant, distressful, dysfunctional, and sometimes dangerous, we should be aware that these criteria are often vague and subjective.

Even functioning that is considered unusual does not necessarily qualify as abnormal. According to many clinical theorists, behaviour, ideas, or emotions usually have to cause distress before they can be labelled abnormal. This criterion takes into account the people’s subjective feelings of content. If people are content with their lives, then they are considered to be mentally healthy and they are of no concern to the mental health establishment. If they are distressed with their thoughts or behaviour then they require treatment. This approach considers people as the judge of their own normality rather than subjecting them to the judgment of society or diagnosticians. The problem with this criterion is that it gives no standards to judge or evaluate behaviour. Therefore, the most important criterion for assessing abnormality is how the behaviour affects the well-being of the individual or the social group. If the individual is not able to meet the day to day demands of his/her life then the pattern is considered as abnormal. The maladaptiveness standard concentrates on the practical matter of getting through life successfully. Researches show that the standard of maladaptiveness focuses on behaviour related to life circumstances and it can accommodate many different styles of living.

It is apparent that all the above criteria have limitation for diagnosing abnormal behaviour. It is either based on facts or values.

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<th>Self Assessment Questions 2</th>
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<tr>
<td>Answer the following questions in a single sentence:</td>
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<tr>
<td>1) How can you say that abnormal function tends to be dysfunctional?</td>
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<td>..........................................................................................................</td>
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<tr>
<td>2) How can you say that ‘danger’ is a feature of abnormal psychological functioning?</td>
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<td>..........................................................................................................</td>
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<tr>
<td>3) How can you conclude that a persons’ behaviour was a ‘crime’?</td>
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2.5 A COMBINED STANDARD

Despite the differences and confusion in explaining the concept of mental illness, most societies have framed a set of categories. The Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association’s and the mental disorders chapter of World Health Organization’s International Classification of Diseases efforts at identifying mental disorders rest on a combined standard of facts and values.

Maher and Maher (1985) gave four basic categories of abnormal behaviour:

- Behaviour that is harmful to the self or that is harmful to others without serving the interests of self.
- Poor reality contact.
- Emotional reactions inappropriate to the person’s situation.
- Erratic behaviour- which refers to sudden shifts in behaviour shown.

2.6 PROBLEMS IN CHARACTERIZING ABNORMAL BEHAVIOUR

Although there are clear criteria for defining abnormality, yet the diagnosing of abnormal conditions still challenging. An example to support this was the experiment conducted by American psychologist David L. Rosenhan in 1973, which was published under the title ‘On being sane in insane places’ in the journal Science, and stirred up a lot of reactions and criticisms among the psychiatric community. It was a two-part experiment exploring the consistency and validity of traditional methods of psychiatric diagnoses. For the first experiment, Rosenhan arranged a group of 8 normal individuals called ‘pseudopatients’ who were known to have no psychological or psychiatric pathology. They included a psychology graduate student, three psychologists, a paediatrician, a psychiatrist, a painter and a housewife. Three of them were women and five of them men. Rosenhan was one among them. These pseudopatients appeared at 12 different psychiatric hospitals (11 university or state hospitals and 1 private hospital), reporting a false complaint of repeatedly hearing something such as “thud”, or “hollow” or “empty” and gaining secret admission. They used pseudonyms (false names) to feign their real identity. However, other than this fabricated complaint of auditory hallucination, they reported no other problems and behaved completely normal, i.e., as they would usually behave. Rosenhan conducted this experiment to see if psychiatrists could correctly identify the pseudopatients with one fabricated symptom, as sane.

To everyone’s embarrassment, all these patients were diagnosed with schizophrenia, except the one who appeared at the private institution who was diagnosed with manic-depressive psychosis. All of them were admitted into inpatient wards, with stay ranging between 7 and 52 days and averaging at 19 days. As instructed and planned prior to the study, these pseudopatients stopped complaining of the initial complaint soon after admission. They observed the condition and happenings inside the psychiatric hospitals keenly.
and took notes diligently. Initially, their note-taking was secretive and discrete, but as soon they realized that no one else was paying attention, they started taking notes openly. They were cooperative, friendly, and pleasant, and were also recorded in the hospital records as being so. Despite all this, none of them were identified as sane during the hospital stay. They were prescribed psychotropic drugs, which they reportedly discarded without the knowledge of the hospital staff. They were released with a discharge diagnosis of ‘schizophrenia in remission’, after they admitted to being insane but feeling improvement. Some of the results of Rosenhan’s experiment came to be known to the staff of a certain teaching psychiatric hospital, which claimed that such errors would not happen at their institution. This claim formed the basis for the second part of the experiment. Rosenhan made an arrangement with this hospital, letting them know that he would send one or more pseudopatients (i.e., sane individuals) to their hospital in the next three month period to gain secret admission. Each staff (including attendants, nurses, psychiatrists, physicians, and psychologists) were asked to rate each patient presenting for admission based on their suspicion of being a pseudopatient and thereby identify the impostors. During the three month period, 193 patients were judged and of these, 41 patients (~21%) were identified as pseudopatients by at least one staff member, while 23 patients (~12%) were identified as pseudopatients by at least one psychiatrist. Nineteen patients (~10%) were identified as pseudopatients by one psychiatrist and one other staff member. The results of this second part of the experiment were more embarrassing than the first – Rosenhan reported that he had sent no pseudopatients to this hospital during that period.

From both these experiments, it can be suggested that traditional methods of diagnosis of mental illness were incapable of identifying, at least uniformly and consistently, even within one nation and one culture, sanity from insanity, and abnormality from normality. In the first experiment, psychiatrists committed a false positive diagnosis of a sane person as insane, i.e., what statisticians would call a Type 2 error. That is to say, the psychiatrists assumed disease even in a healthy individual, rather than missing a serious diagnosis such as schizophrenia. This is understandable, given the style of training during medical education where assuming illness in a healthy person (in order to give the benefit of doubt and empiric beneficial treatment) is taught to be more acceptable than missing a diagnosis of a potentially serious illness. In the second part of the experiment, when the staff were consciously alerted of the possibility of faking insanity, they tended to make numerous false negative diagnoses, i.e., Type 1 errors. Thus, Studies show that Rosenhan concluded that due to a significant rate of Type 1 and Type 2 errors, the contemporary diagnostic method for mental illness was unreliable.

### 2.7 CAUSES OF ABNORMALITY

Besides the above facts, there are certain causal factors that causes or leads to abnormality, like:

#### 2.7.1 Biological Factors

Studies shows that certain kinds of mental illnesses are related to an abnormal balance of special chemicals in the brain called neurotransmitters.
Neurotransmitters help nerve cells in the brain to communicate with each other. If these chemicals are out of balance or are not working properly, messages may not be conveyed through the brain correctly, leading to symptoms of mental illness. Other biological factors such as defects in or injury to certain areas of the brain have also been linked to some mental conditions.

Biological factors that may be involved in the development of mental illness include:

- **Genetics (heredity)**: Many mental illnesses run in families, suggesting that people who have a family member with a mental illness are more likely to develop such illness themselves. Mental illness itself occurs from the interaction of multiple genes and other factors for example, stress, abuse, or a traumatic event that can influence, or trigger, an illness in a person who has an inherited susceptibility to it.

- **Infections**: Certain infections have been linked to brain damage and the development of mental illness or the worsening of the symptoms.

- **Brain defects or injury**: Defects in or injury to certain areas of the brain has also been linked to some mental illnesses.

- **Prenatal damage**: Some evidence suggests that a disruption of early foetal brain development or trauma that occurs at the time of birth; for example, loss of oxygen to the brain may be a factor in the development of certain conditions, such as Autism.

### 2.7.2 Substance Abuse

Long-term alcohol or substance abuse, in particular, has been linked to anxiety, depression, and paranoia.

### 2.7.3 Psychological Factors

The psychological factors involved in the development of mental disorders include severe psychological trauma experienced since childhood, such as emotional, physical, or sexual abuse, an important early loss, such as the loss of a parent, neglect, and poor ability to relate to others.

### 2.7.4 Environmental Factors

Certain stressors can trigger an illness in a person who is susceptible to mental illness. These stressors include: death or divorce, a dysfunctional family life, feelings of inadequacy, low self-esteem, anger, or loneliness, changing jobs or schools, social or cultural expectations, and substance abuse by the person or the person’s parents.

The paradigm of biopsychosocial model incorporates biological, psychological and social factors (already discussed in the previous block). This model attempts to understand mental disorders from the perspective that it can arise from multiple sources and that no single accepted or consistent cause has been established.
Normality and Abnormality

2.8 LET US SUM UP

We started up with a discussion towards understanding the concept of normality. You were also explained about the various criteria, measurement and aetiology (causes) of abnormality. It can be summed up from the above discussions that, the abnormal functioning is generally considered to be deviant, distressful, dysfunctional, and dangerous. While assessing any behaviour, it is important to consider the context in which it occurs. Further, the concept of abnormality depends on the norms and values of the society in question. A variety of perspectives and professionals have come to operate in the field of abnormal psychology, and many well-trained clinical researchers now investigate the field’s theories and treatments.

2.9 UNIT END QUESTIONS

1) Define normality?
2) Describe ways to distinguish between normal and abnormal behaviour?
3) What are major criteria for assessing normal behaviour?
4) What are the traits that a normal person usually possesses?
5) What are the major criteria for assessing mental illness?
6) What are basic causes of abnormal behaviour?

2.10 ANSWERS TO SELF ASSESSMENT QUESTIONS

Self Assessment Questions 1

1) False
2) True
3) True
4) False
Self Assessment Questions 2

1) Abnormal behaviour tends to be dysfunctional because it interferes with daily functioning or normal routine. Mental illness upsets, distracts, or confuses people so much that they cannot care for themselves properly, interact socially interactions, or work productively.

2) Abnormal behaviour is dangerous to self or others. Individuals whose behaviour is consistently careless, hostile, or confused may be placing themselves or those around them at risk.

3) A person’s behaviour is termed as ‘crime’, if he/she violates legal norms.

Self Assessment Questions 3

1) nerve cells

2) more likely

3) Mental illness

4) childhood

2.11 REFERENCES


UNIT 3 CONATIVE FUNCTIONS – NORMAL AND PATHOLOGICAL

Structure

3.0 Introduction
3.1 Objectives
3.2 Meaning and Definition of Conation
3.3 Phases of Conative Style
   3.3.1 Direction Phase
   3.3.2 Energizing Phase
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3.4 Conative Functions and Well Being
3.5 Conative Issues
3.6 Physiological Aspects of Conation
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3.12 Answers to Self Assessment Questions
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3.0 INTRODUCTION

In the previous unit, you were explained about the meaning and definition of abnormality. We also tried to differentiate between the concepts of normality and abnormality. In this unit, we will discuss about meaning and definition of conation and certain conative functions. It will also deal with the different phases, modes, impact and measurement of the conative component of mind.

3.1 OBJECTIVES

With the help of this unit, you will be able to:

- define the meaning of conation;
- explain the phases of conation;
- describe the conative functions and issues; and
- elucidate the impact, measurement and pathology of conative component of mind.
3.2 MEANING AND DEFINITION OF CONATION

Conation is defined by Funk & Wagnalls, *Standard Comprehensive International Dictionary* (1977) as “the aspect of mental process directed by change and including impulse, desire, volition and striving”, and by the *Living Webster Encyclopedia Dictionary of the English Language* (1980) as “one of the three modes, together with cognition and affection, of mental function; a conscious effort to carry out seemingly volitional acts”.

Conation has been derived from a Latin word- conatus which refers to an impulse or reflexive action towards an effort. You must be informed here that our mind consists of three parts- cognitive, affective and conative. Cognition refers to the knowing and understanding, it is a measure of level of intelligence; affective refers to the emotional interpretation of perception, information or knowledge while, conative is that component of the mind that connects the knowledge and affect to behaviour, that is, it drives one to act on those thoughts and feelings.

In short, it can be said as the mental process that activates and/or directs behaviour and action. It is an inclination, a wish or drive to act purposefully. Various terms are used to represent some aspect of conation. It includes intrinsic motivation, goal-orientation, volition, will, self-direction, and self-regulation (Huitt & Cain, 2005).

It has been further explained that conation refers to behaviour which is personal, intentional, deliberate, goal oriented, or to the striving component of motivation and that it is proactive. It is considered critical for an individual to successfully engage in self-direction and self-regulation. Some examples of conation are having an achievement orientation, establishing a life vision, setting goals, and regulating one’s behaviour (Huitt & Cain, 2005).

3.3 PHASES OF CONATIVE STYLE

Huitt (1996) demonstrated different phases of conative style and also the processes involved in each phase. The phases and the processes involved in each phase has been described in the subsections below:

3.3.1 Direction Phase

The direction phase is that significant step which involves five aspects- defining one’s purpose, identifying human needs, aspiring and envisioning possible futures, making choices and setting goals by individuals. Firstly, purpose is successfully attained if the individual becomes aware of his/her needs. The second aspect refers to become aware of the “possible self.” The third aspect involves an individual’s attempts to exercise control or the freedom to choose and control one’s thoughts and behavior. It must be noted here that volition is inter related to affection and cognition. Volition has two subcomponents: Covert (in which an individual takes full control of his/her actions) and Overt (which refers to taking control of the environment that impacts one’s actions (Corno, 1993). The fourth aspect of the direction component of conation is the setting of goals for the directions that have been chosen. Dweck (1990) differentiates two types of goals: Mastery goals that focus on developing competence or on the process of learning, and
Performance goals that focus on the outcome, winning, or attaining credentials. A fifth aspect of successful self-direction is to develop plans that can turn visions and goals into reality.

3.3.2 Energizing Phase

In the energizing phase an individual involves in overcoming inertia, having high self esteem, physical fitness and physical energy, paying attention, talking positively, managing emotions and having positive interaction with others.

3.3.3 Preserving Phase

The preserving phase involves engaging one self in daily self renewal, monitoring thoughts, emotions and behaviour, making self evaluation, reflecting on progress and completing tasks. Studies have shown that, motivation and persistence are important in predicting levels of expertise or knowledge. Thus conation helps in the field of education by means of helping in identifying and setting goals, focusing attention and completing tasks with the help of all the three phases mentioned above.

3.4 CONATIVE FUNCTIONS AND WELL BEING

Kolbe (1990) suggested that a healthy human being has a conative style or a preferred method of putting thought into action or interacting with the environment. Kolbe identifies four action or conative modes:

- **Fact Finder** (instincts to probe, refine and simplify);
- **Follow Thru** (instincts to organize, reform and adapt);
- **Quick Start** (instincts to improvise, revise and stabilize); and
- **Implementor** (instincts to construct, renovate and envision).

In Kolbe’s formulation, it is the combination of the striving instinct, reason, and targeted goals that results in different levels of commitment and action among normal individuals. Infact, conative functions are necessary components for students and play a vital role in education of children. Students needs to develop the conative attitudes and skills in order to be self directed, goal oriented and increase their personal efficiency.

Researches indicate that volition or will or freedom of choice is a very necessary component for an individual to act or behave voluntarily. Conation is closely associated with the concept of volition, defined as the use of will, or the freedom to make choices about what to do (Kane, 1985; Mischel, 1996). It is absolutely critical if an individual is to successfully engage in self-direction and self-regulation. Further, conation intends to explain the ways through which the knowledge and emotion are translated into behavior in human beings.

3.5 CONATIVE ISSUES

Some of the conative issues one faces daily are:

- What is my life’s purpose and are my actions congruent with that purpose?
- What are my aspirations, intentions, and goals?
On what ideas, objects, events, etc. should I focus my attention?
What am I going to do?
What actions am I going to take, what investments am I going to make?
How well am I accomplishing what I set out to do?

During the origin of modern psychology both emotion and conation were considered central to the field but later on cognition and behavior or action started gaining more importance. Yet, the conative issues when generated within individual it helps to prepare children and youth for adulthood (e.g., basic skills, critical thinking).

3.6 PHYSIOLOGICAL ASPECTS OF CONATION

Research into the physiological aspects of the brain functions shows that the Supplementary Motor Area (SMA) is associated with the development of intention to act. The medial limbic cortex and the primary motor cortex are involved in the specification and elaboration of action.

It has also been found that conation is related to behaviour which is personal, intentional, deliberate, goal oriented, or striving component of motivation and it is proactive. It is also been associated with the concept of volition or the will of a person. It is absolutely critical if an individual is to successfully engage in self-direction and self-regulation.

Self Assessment Questions 1
State whether the statements are ‘True’ or ‘False’:

1) Affection refers to the knowing and understanding, it is a measure of level of intelligence ................................ .
2) During the origin if modern psychology both emotion and conation were considered central to the field but later on cognition and behavior or action started gaining more importance ........................................ .
3) Kolbe identified six action or conative modes of behaviour .................. ........................................... .
4) In the energizing phase an individual involves in overcoming inertia, paying attention, talking positively, managing emotions and having positive interaction with others ......................................... .

3.7 MODES OF CONATION

Conation is thought to be both instinctive and distinctive.

In discussing the conative nature of man, Fromm in his work “Human Ethics”, mentioned that a man achieves virtue through the active use he/she makes of his/her powers, that is being productive. For example, when a man is uncertain in any situation he/she will attempt to use his/her power to deal with the situation. If he/she faces the reality without fear, he/she will realize that there is no meaning to life except that the meaning he/she gives to his life by living productively. An individual folds his/her powers by living productively. This is achieved by constant vigilance, being active and effortful so that it keeps him/her away from failure of being a productive person.
Fromm explains that the mental, emotion, and sensory responses to others to oneself and to things is the productive orientation of a person. Productiveness is the person’s ability to use his powers and realize his/her potentials. Common view of all thinkers regarding conation is that the person’s character can be determined through his/her actions (actions speak louder than words).

Murray’s (1938) concept of conation denotes a persistent effort, intention, volition, and an act of willing to attain a specific goal. He also states that one’s personality is continuously involved in deciding between alternative conflicting tendencies or elements. The most demanding conflicts are sometimes between two different conations. For e.g. A woman wants to be a good housewife or to have a successful career. The energy needed for conations is directed by the goal which the person has.

In the late 1940’s, Raymond Catell, explained about conational modalities. He described the instinct aspect of conation as erg. He explained that it was innate (inborn) psychological or physical disposition. It permits the person to acquire reactivity through certain classes of objects more readily than to others.

### 3.8 MEASUREMENT OF CONATION

It was Kolbe who developed an assessment tool that focuses on mainly the conative domain of mind in 1990. It assesses the Kolbe index. Kolbe index refers to the innate strengths of individual which are driven by universal instinct. In other words, it is the innate predispositions that activates an individual’s behaviour. Particular strengths differ from person to person, but each individual’s strengths are unchanged throughout their life. These strengths can be observed and measured as people engage in purposeful actions. They can be categorized in consistent behaviour patterns or instinctive way of striving to attain goals.

As mentioned in the previous section also, Kolbe’s system identified four action modes:

<table>
<thead>
<tr>
<th><strong>Kolbe Action Modes</strong></th>
<th><strong>Striving Behaviours</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fact Finder</td>
<td>Gathering and sharing information</td>
</tr>
<tr>
<td>(A fact finder is an individual who has instincts to probe, redefine and simplify.)</td>
<td></td>
</tr>
<tr>
<td>Follow Thru</td>
<td>Organizing, arranging and designing</td>
</tr>
<tr>
<td>(A follow thru is an individual who has instincts to organize, reform and adapt)</td>
<td></td>
</tr>
<tr>
<td>Quick Start</td>
<td>Dealing with unknowns, uncertainties and risks</td>
</tr>
<tr>
<td>(A quick start is an individual who has instincts to improvise, revise and stabilize)</td>
<td></td>
</tr>
<tr>
<td>Implementor</td>
<td>Handling tangibles, mechanics and space</td>
</tr>
<tr>
<td>(An implementor is an individual who has instincts to construct, renovate and envision)</td>
<td></td>
</tr>
</tbody>
</table>
3.9 IMPACTING CONATION

The conative component of mind can be significantly influenced by social environment. Therefore, in order to create a significant impact of conation the parents, educators, and other individuals should emphasize towards developing the conative components of mind of the child or youth, in order to enhance self-direction, self-determination, and self-regulation among them. Specifically, young people need to imagine possibilities in their lives, set attainable goals, plan routes to those goals, systematically and consistently put goals and plans into actions, practice self-observation, reflect on results, and manage emotions. These need to be addressed in a spiraled curriculum because of the developmental aspects of their successful utilization.

3.10 CONATION AND PATHOLOGY

Pathological condition of conation may lead to affective-conative exaggeration referred to as manic-depressive or Dionysian component where in Dionysian is less pathological in comparison to hypomanic behavior and manic depressive psychosis. It will also lead to failure of adaptive function in normal expression of primary components of temperament. Further, it may result in to narrow-mindedness or may turn an individual to be ego-centric, which is a type of Paranoia. Further, it may also inhibit an individual to act or behave, resulting in a type of schizophrenia.

Self Assessment Questions 2

Fill in the Blanks:

1) Kolbe who developed an assessment tool that focuses on mainly the conative domain of mind which assesses the ........................................... .......... index.
2) Murray’s (1938) concept of conation denotes a persistent effort, ............. ................................ and ................................................
3) Conation is thought to be both instinctive and ..................................
............... .................................. 
4) Pathological condition of conation may lead to affective-conative exaggeration referred to as ........................................................ .

3.11 LET US SUM UP

It can be summed up from the above discussion that conative component is an essential component of mind. The distinctive phases and components of conation is significant and essential for an individual to regulate behaviour. It can contribute significantly in educating children and adolescents. It can also be measured with the help of Kolbe’s index. Any injury to the conative mind may lead to harm in self direction and result in to several mental disorders.
3.12 ANSWERS TO SELF ASSESSMENT QUESTIONS

Self Assessment Questions 1

1) False
2) True
3) False
4) True

Self Assessment Questions 2

1) Kolbe
2) intention, volition, and an act of willing to attain a specific goal
3) distinctive
4) manic-depressive or Dionysian component

3.13 UNIT END QUESTIONS

1) What is conation?
2) How is connation related to behaviour?
3) Explain the different modes of conation.
4) Write about the measurement of Conation.
5) Describe the phases of conation.

3.14 REFERENCES


Damasio, A. (1985). Understanding the mind’s will. The Behavioral and Brain Sciences, 8.4, 589


Hoffman, E. (201). Psychology testing at work. How to use, interpret, and get the most out of the newest tests in personality, learning style, aptitudes, interests, and more! McGraw Hill.


Kant, I. The critique of practical reason. (translated by Thomas Kingsmill Abbott).


<http://en.wikipedia.org/wiki/Conation- accessed on 8/6/15>

UNIT 4  COGNITIVE FUNCTIONS - NORMAL AND PATHOLOGICAL

Structure

4.0 Introduction
4.1 Objectives
4.2 General Cognitive Functions
  4.2.1 Attention
  4.2.1.1 Types of Attention
  4.2.2 Executive Functions
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    4.2.3.1 Assessment of Working Memory
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4.0 INTRODUCTION

This is the last unit of the block. Till now you must have understood different facts about abnormality in behaviour. This unit will try to explain you the contribution of cognitive functioning towards human behaviour. Basically, the cognitive function refers to a person’s ability to process thoughts like memory, ability to learn new information, comprehension, decision- making, problem-solving, and the ability to read, write and speak. Usually the healthy or normal individuals have a sound brain which is capable enough to acquire new skills in each of these areas, especially in early childhood, and of developing personal and individual thoughts about the world. Factors such as aging and disease may affect cognitive function over time, resulting in issues like memory
loss and trouble thinking of the right words while speaking or writing. Cognitive function is an intellectual process by which one becomes aware of, perceives, or comprehends ideas. It involves all aspects of perception, thinking, reasoning, and remembering.

In order to understand how normal cognitive functions work and how they are restored after damage, neuropsychologists have developed various assessment methods, called methods of neuropsychological assessment. These aim to provide information and understanding about the functioning level of several cognitive areas (e.g. attention, memory, visuo-spatial ability, etc.) and can be interpreted in both quantitative and qualitative terms. In this unit, you will come to know about the various disorders related to improper brain functioning and the different ways of neuropsychological assessment.

### 4.1 OBJECTIVES

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

- understand the different processes and functions of cognition;
- understand the process of pathological cognitive functions;
- know the various disorders related to impairment in cognitive functions; and
- understand the importance of neuropsychological assessments.

### 4.2 GENERAL COGNITIVE FUNCTIONS

Generally the cognitive function is described in terms of the concept of intellectual ability. There are also primary factors at a lower level (e.g. quantitative reasoning, spelling, free recall and simple reaction time) which takes place with the help of intellectual skills as a function of brain.

Predominantly, there are certain cognitive domains which deals with various functions essential for the normal and healthy well being. Infact these domains are assessed even when neuropsychological tests are administered, because any impairment in brain is related to improper functioning of these cognitive domains. In the following subsections, you will be explained about the various cognitive domains and functions.

#### 4.2.1 Attention

Technically speaking, *attention* is the process of allocating resources to various inputs. For the brain to function effectively there is a need for a selective process that helps the organism to focus on the most important information for further processing. The process of attention involves several processes including sensory selection, response selection, attentional capacity and sustained performance. Attention is often divided into the following components: alertness/arousal, focused attention, selective attention, divided attention and sustained attention (vigilance). The different tests designed to assess impairment in attention (which affects normal functioning of individuals) usually
measures more than one of these processes as motor speed, speed of information processing, verbal ability, etc.

The capacity to sustain attention over a period of time is impaired in patients with brain injury or children with attention-deficit hyperactivity disorder. The impairment affects the performance of the patient on a continuous or repeated activity. Attention deficits may be related to slow processing speed, which can be evaluated by measures of reaction time and information processing speed.

4.2.1 Types of Attention

It is important for you to know that attention are of different types as discussed below:

Selective attention

Our environment provides us various information at a single time and our sensory apparatus is constantly exposed to many inputs, yet we seem to automatically focus on one channel of input at the expense of others. This ability to focus on one stimulus in the presence of many stimuli is known as selective attention. For example, if you are hungry you will look for some edible item only from your kitchen irrespective of other items present over there.

Vigilance

This refers to our ability to sustain attention over time on the same stimulus that is, concentration. For example, when we are listening to a lecture, we will try to focus on the talk throughout. Obviously, this is different from selective attention; it requires more conscious effort. Variability in vigilance skill is related to some neurological diseases and psychiatric disorders.

Arousal and alertness

These are terms that have usually been linked to physiological states that may vary in relation to attention. Consider your own circadian pattern of alertness for example. Every 24 hours you experience 6–8 hours of sleep during which time you are relatively unresponsive to external stimuli, although a clap of thunder or a loud firework may nevertheless disturb you. During your waking hours, you are certainly more alert at some times than others. Research has shown that alertness generally improves through the day, reaching a peak in early evening, and then diminishing towards bedtime. Sudden unexpected events can interfere with your level of alertness when you are awake, just as they can when you are asleep.

4.2.2 Executive Functions

These are complex processes which are more related to a kind of supervisory capacity. Executive function is of importance for purposeful, goal-directed behaviour. Studies indicate that, in situations where no previously learned routines are of use, executive functions contribute to the development of new strategies and monitor their effectiveness.
The concept of Executive Function was introduced by Lezak. The concept encompassed components of volition (motivation to act), planning, purposive action, and regulatory execution. Executive function is therefore a complex mental process involving emotional arousal, cognitive processing and planning, and execution dependent on both emotional needs and cognitive processes.

Executive functions are needed for all mental activities requiring control of temporal sequence and multitasking. The sequencing and multitasking nature of executive function involves several areas of brain areas like the different functional circuits of the frontal lobes, each functional system engaging to carry out a specific task demand. The logistic of the executive function could be explained using the model of working memory. Working memory is required to understand or speak a logical sentence and to tackle a complex logical or strategic problem, to do so the brain employs all its different functional capabilities in a complex chain of processing. Frontal cortex plays a vital role because it regulates the processes and interaction of both the emotional function and working memory. This makes it clear that an increase in emotion arousal has an adverse effect on the efficiency of executive function. During overwhelming emotional arousal, processing related to working memory is inhibited, and effectiveness in planning, thinking, and decision making is impeded along with narrowing of ability for attention supervision of information intake and their processing.

For example, “if you are thirsty while working in your room, then you will feel like having water. Your previous experience of drinking water has made it clear to you that water will quench your thirst. Your experience may also reveal that drinking water is available in the adjacent room. The retrieval of the stored information of your earlier experience helps to draw a new action plan, which could ultimately help you to quench your thirst, when executed. The action plan involves strategies to get up from your seat, and walk out of the door and go into the next room. This is possible only if you have the necessary visual information of the location and distance of a door that would let you out of the room and into the next room. Having the related visual information helps you to walk to the door. The movements are regulated by the relevant visual sensory information. The visual information of the location of the door and its distance help to walk in that direction. However, until one has walked through the door, the visual information of the door is only a hypothesis, which has a probability to be wrong. Walking through the door is the reality verification of the sensory information. Once you have a glass of water in front of you on the table, you need to have further visual information of the glass on the table and its distance from you. These pieces of information regulate your extension of the hand towards the glass and its termination before the fingers reach the glass. The next task is to lift the glass from the table. Even before the glass is lifted, you approach it with all the fingers of your right/left hand. How will you do this if you were to lift a piece of paper or a heavy book from the table? In the case of the paper, you will try to lift it with your index finger and the thumb, while you may use both the hands to lift a book or heavier object. Why wouldn’t we try to lift the glass with either the hands or only two fingers? It is the anticipation of the weight of the object that helps to assume a motor set even before the actual execution is on its way. Anticipation is based on your experience,
which is readily made available to the frontal cortex so that it could be used to regulate the motor act. The anticipation is verified only when you carry out the act itself. Motor regulation therefore takes place on actual outcome as well as anticipated effects of an intended act.

Dysfunction in executive functions can be manifested as inappropriate social behaviour, difficulties in decision-making, problems in showing good judgment when there is a need to change plans, difficulties in initiation, organizing and following plans, being easily distracted and limitations in the use of various aspects of memory. Further, while executive disturbances often arise following damage to prefrontal regions, they may also occur in the context of dysfunction to other brain regions.

4.2.3 Working Memory

In the above subsection, you were informed that frontal cortex regulates the functioning of working memory. Let us understand the process and relevance of working memory in detail. Baddley and Hitch developed the concept of working memory for explaining the principle of use of immediate memory for cognitive processing. They postulated immediate memory as part of larger memory system called the working memory, in which information is transiently stored. The information thus stored is employed for current planning and processing. They considered working memory as a dual buffer memory system, one for storing verbal and the other for visual information. A third component was called the central executive, which has a managerial function to manipulate and coordinate the information stored in the buffer areas for planning, problem solving and other organizational activities. The buffer memory could store words, names, numbers and visual images required for online processing of information and execution of planned actions. The most significant aspect of the working memory was considered its transient nature as it was considered to operate only for seconds.

Thus working memory refers to the capacity to store as well as manipulate information in the brain for relatively brief periods of time. In that way, it provides a mental workspace required for day-to-day activities. The main difference between working memory and episodic/semantic type of memory is the direction of time in which the two processes take place, working memory is an online process, while in the other, relevant information stored in the past is brought to the present. Working memory involves holding selected information for a current processing. Current processing may involve several sequential steps based on a certain action plan or consider several aspects of a problem simultaneously, so that the different steps (aspects) are carried out in a forward direction.

An arithmetic problem is given below for solving it mentally. Read out the problem in one stretch, do not read it in parts, and solve the problem mentally.

Add 3 and 4 and subtract the total from the sum of 5 and 6: The answer is 4

Let us see how we managed to arrive at this answer. First, we added 3 and 4 and got the answer as 7. We held on to the 7, and added 5 and 6. The second addition gave us 11 as the answer. In the next step, we subtracted the 7, which we were holding on so far, from 11 and got the final answer of 4.
It shows that we have to carry out three separate arithmetical operations in parts (two additions and one subtraction) and hold on to the answer of each part temporarily till the whole problem was solved. The arithmetic operations additions and subtraction are the functions of the Central Executive. The other function of the Central Executive is to hold on to the action plans as well as answers that are generated as part of the ongoing operation in awareness. It is said to be held in awareness, as the information is considered available on line, and not retrieved from memory.

Impairment in working memory will lead to loss of such awareness and instant use of available information. It may also lead to inability in planning, problem solving and other organizational activities.

4.2.4 Memory

Memory refers to the processes of encoding, storing and retrieving information. Long-term memory refers to permanent storage and it is further divided into explicit (or declarative) and implicit (or procedural) memory. Explicit memory is the conscious recall of stored information and implicit memory refers to more heterogeneous abilities, such as priming, skill learning, procedural memory and habit formation (Strauss, Sherman et al. 2006). Dysfunctioning of memory will lead to inability in encoding and storing of the information received and recall of existing information.

4.2.5 Language

Language is the ability to communicate verbally and through symbols in human societies. It is the way of social interaction. Deficit in speech and language inhibits effective communication. Numerous tests have been developed to assess speech and language functions. There are comprehensive batteries, specific-function tests, tests for receptive and expressive language functions and tests directed at the functional ability to communicate in everyday life situations (Strauss, Sherman et al. 2006).

4.2.6 Visual Perception and Visuo-spatial Ability

The two main goals of higher-level vision have been described as the identification and localization of stimuli (‘what and where’). The first refers to difficulties in locating single objects in space (provided normal visual acuity) and the second refers to spatial analysis in more complex tasks. A faulty analysis of relative spatial information can be assessed with the help of measures of assembling and drawing.

4.2.7 Complex Motor Programming

Brain also regulates the ability to regulate ongoing voluntary motor behaviour. Anticipation of outcome in response to a stimulus and the actual outcome of behaviour is the chief aspect of complex motor programming. Anticipation is the perception of the intended act, even before the act is executed. Sensory information facilitates an action plan and the anticipated effect of the action allows altering the plan of action even before and during the course of action. Anticipation regulates the actions at every step. It can be said that anticipation is a process of predicting an outcome; the brain carries out the prediction
based on stored information and online sensory input. Brain is continuously involved in anticipation of effects and regulates the execution of actions. Motor programming explains how actions are composed, and synchronized sequentially for achieving a predefined effect and goal.

**Self Assessment Questions 1**

State whether the following statements are ‘true’ or ‘false’:

1) Memory refers to the processes of encoding, storing and retrieving information .................................. .

2) **Attention** is the process of inhibiting resources to various inputs ........ ...................... .

3) Dysfunction in executive functions can be manifested as inappropriate social behaviour, difficulties in decision-making, problems in showing good judgment ......................... .

4) **Arousal** refers to our ability to sustain attention over time on the same stimulus that is, concentration ........................................ .

### 4.3 BRAIN DISEASE

Several diseases and injuries affect the brain and its functions. Some of the diseases have been discussed in the following subsections:

#### 4.3.1 Delirium

Delirium is marked by short-term confusion and disorientation and tends to develop with rapid onset and fluctuates in intensity. It usually occurs more frequently in older people. Typically, delirium is characterized by fluctuating course, deficits in attentional ability, disorganization of behaviour, cognitive changes, perceptual deficits, and alterations in sleep-wake cycle. It may also be accompanied by psychotic features such as hallucinations and delusions.

The causal factors (aetiology) of delirium are:

- General medical condition (example- infection)
- Substance induced (example- cocaine, opioids)
- Multiple causes (example- head trauma and kidney disease)
- Delirium not otherwise specified (example- sleep deprivation).

#### 4.3.2 Dementia

Dementia is typically characterized by the loss of previously acquired cognitive functions. It affects memory, thinking, judgment and behaviour. Most types of dementia involve changes in the functioning of the brain that cannot be stopped or turned back. However, with recent advancement in medicines, these can be slowed down. Problems with cognitive functions include those in the areas of language, memory, perception, emotional behaviour or personality, and cognitive skills (calculation, abstract thinking or judgment). Some of the types of Dementia are:
Dementia of Alzheimer’s type, which usually occurs in the persons over 65 years of age and is manifested by progressive intellectual disorientation

Vascular dementia caused by vessel thrombosis or hemorrhage

Other medical conditions (HIV, head trauma, Pick’s disease, Creutzfeld-Jacob disease, etc.)

Substance, toxin or medication induced

Multiple etiologies

In the early stages of Dementia, individuals have mild forgetfulness that is only slightly noticeable and annoying. Symptoms gradually increase and they become obvious. They may also severely affect the capacity of the person to take care of oneself. For example, memory loss is initially only a mild impairment such as being unable to retain new information. They worsen gradually, and the person affected will be unable to remember basic facts about themselves and their lives.

4.3.3 Amnestic Disorder

Amnestic disorder is marked by memory impairment and forgetfulness. It is a kind of total loss of memory. Subcategories include:

- Caused by medical condition (for example – hypoxia, vitamin B1 deficiency)
- Substance, toxin or medication induced

4.3.4 Mild Cognitive Impairment

It is a stage between normal forgetfulness due to ageing and the onset of dementia. Symptoms include-difficulty in performing more than one task at a time, difficulty in solving problems or making decisions, forgetting recent events or conversations, and taking a longer time to perform more difficult mental activities.

4.3.5 Stroke

Stroke is a condition which occurs when the blood supply in brain is interrupted or reduced. It may occur in the condition of blockage in artery or bursting of blood vessels. Impairments after stroke vary, depending on the site and extent of the lesion in the brain. Fundamental cognitive functions such as attention, motivation, affect and emotion could be impaired, as also abilities vital for information retrieval, speed and ability of processing, e.g. perception (visuospatial difficulties such as visuospatial neglect), memory and executive functions. Language and communication abilities are often also impaired – after left hemisphere lesions as different kinds of aphasias and after right hemisphere lesions as pragmatic language disturbances.

4.3.6 Traumatic Brain Injury

TBI can occur when there is exposure to trauma resulting in damage to the brain. TBI patients show a variety of cognitive dysfunctions and also behavioural, emotional and social problems. Their problems may be long-lasting. Prominent problems with patients with traumatic brain injuries are related to cognitive and emotional issues that increase with passage of time. Cognitive performance on attention, memory, language and reaction time can be severely impaired.
Neuropsychology is the study of the relationship between human brain functions and human behaviour. The behavioural expression of brain dysfunction is studied with the help of clinical neuropsychology. It is an applied science and involves assessment of brain functions. The goal of clinical neuropsychology is to:

- Diagnose the presence of brain damage and dysfunction as well as the preserved cognitive and executive functions, emotion and motivation.
- Facilitate patient care and rehabilitation. It is also useful as it serves as a baseline for cognitive training.

### 4.4.1 Purposes of Neuropsychological Examinations

As mentioned earlier to you that clinical neuropsychology is the study of brain functions and its impact on human behaviour. With the advancement of technologies, the diseases/disorders of brains can now be studied as well as assessed with the help of neuropsychological examinations. Some of the relevant purposes of neuropsychological examinations are:

- It helps in diagnosing and patient care in terms of treatment management and planning;
- It helps in identification of patient needs; e.g. when designing individualised treatment programmes;
- It helps in evaluation of treatment efficacy; and
- It also helps in research and exploration of brain dysfunctions.

A typical neuropsychological evaluation will involve assessment of the following:

- General intellect
- Higher level executive skills (e.g., sequencing, reasoning, problem solving)
- Attention and concentration
- Learning and memory
- Language
- Visual–spatial skills (e.g., perception)
- Motor and sensory skills
- Mood and personality

Neuropsychological assessment can help with the answers to diagnostic questions. For example, it can be used to discriminate between psychiatric and neurological patients, when distinguishing between different neurological disorders and when localizing the site or brain hemisphere side of a lesion.

A neuropsychological assessment can also be used as a predictive instrument and it can also identify mild disturbances in cases when other diagnostic tools
have produced ambiguous results. It also aids in the assessment of recovery of function after brain injury and thus in rehabilitation planning and in determining the effectiveness of medical treatment. The results of neuropsychological assessment not only helps the patients, it also assists the responsible family members to understand the requirements in home environment which can encourage the patients to involve in activities and participation so that realistic life goals and rehabilitation programmes can be planned.

An emphasis on greater consideration of the functional implications of neuropsychological test results has emerged. Referrals to neuropsychological assessments are now being made in order to establish the abilities of patients to perform activities of independent living or return to a previous occupation.

The two commonly used comprehensive neuropsychological assessments batteries are:

1) The Halstead–Reitan and
2) The Luria–Nebraska
3) NIMHANS Battery in India.

<table>
<thead>
<tr>
<th>Self Assessment Questions 2</th>
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<tbody>
<tr>
<td>Answer the following questions:</td>
</tr>
<tr>
<td>1) What is neuropsychology?</td>
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<td>..........................................................................................................</td>
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<td>2) What is a stroke?</td>
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<td>..........................................................................................................</td>
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<td>3) What is mild cognitive impairment?</td>
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<td>4) What are the aetiology of delirium?</td>
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**4.5 LET US SUM UP**

It can be summed up from the above discussions that impairment in the brain functions can lead to change in normal behaviour of humans. Understanding cognitive processes in explaining behaviour is important aspect of mental health. It can be seen that cognitive processes can affect both normal and abnormal behaviour. Assessment of these functions and relating it to behavioural aspects helps in diagnosis and treatment of abnormal behaviour. Neuropsychology has contributed significantly towards the assessment of brain disorders and their treatment.

**4.6 UNIT END QUESTIONS**

1) What are the various cognitive functions?
2) What are the types of memory?
3) Describe how memory is affected in Dementia.

4) Explain how executive functions are important?

### 4.7 ANSWERS TO SELF ASSESSMENT QUESTIONS

**Self Assessment Questions 1**

1) True

2) False

3) True

4) False

**Self Assessment Questions 2**

1) Neuropsychology is the study of the relationship between human brain functions and human behaviour.

2) Stroke is a condition which occurs when the blood supply in brain is interrupted or reduced. It may occur in the condition of blockage in artery or bursting of blood vessels.

3) It is a stage between normal forgetfulness due to ageing and the onset of dementia.

4) The causal factors (aetiology) of delirium are:

   General medical condition (example- infection); Substance induced (example- cocaine, opioids); Multiple causes (example- head trauma and kidney disease) and Delirium not otherwise specified (example- sleep deprivation).

### 4.8 REFERENCES


University Press.


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