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# UNIT 10 APPLICATIONS OF PSYCHOLOGY\*

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## Structure

- 10.0 Introduction
- 10.1 Objectives
- 10.2 Clinical and Health
  - 10.2.1 Clinical Psychology
  - 10.2.2 Counseling Psychology
  - 10.2.3 Health Psychology
- 10.3 Work and Organisation
  - 10.3.1 Engineering Psychology
  - 10.3.2 Industrial/Organisational Psychology
  - 10.3.3 Consumer Psychology
- 10.4 Education and Sports
  - 10.4.1 Educational Psychology
  - 10.4.2 School Psychology
  - 10.4.3 Sports Psychology
- 10.5 Criminal and Forensic
  - 10.5.1 Forensic Psychology
  - 10.5.2 Criminal Psychology
- 10.6 Environment
  - 10.6.1 Environmental Psychology
- 10.7 Military and Aviation
  - 10.7.1 Military Psychology
  - 10.7.2 Aviation Psychology
- 10.8 Let Us Sum Up
- 10.9 Unit End Questions
- 10.10 Glossary
- 10.11 Answers to Self Assessment Questions
- 10.12 References and Suggested Readings
- 10.13 References for Images

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## 10.0 INTRODUCTION

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Have you ever seen any crime investigating serial or movie? If you had, then you must be familiar with the following scene.

The branch of psychology which helps law enforcing agencies in crime scene investigation is known as Forensic psychology. It is one of the many applied areas of psychology. In this chapter, we will discuss the application of psychology in the varied field such as health, education, organization, law, environment, and military.

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**Fig.10.1: Crime Scene Investigators**

**Source** <https://www.allcriminaljusticeschools.com/forensics/how-to-become-a-crime-scene-investigator/>

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## 10.1 OBJECTIVES

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By the end of this Unit, you would be able to:

- Comprehend the application of psychology in the fields of clinical and health;
- Understand the role of psychology in the organization, education, and sports;
- Know how psychology can contribute to understanding criminal behaviour;
- Know the role of psychology in understanding environmental issues; and
- Appreciate the role of psychology in the area of military and aviation.

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## 10.2 CLINICAL AND HEALTH

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### 10.2.1 Clinical Psychology

Clinical psychologists perform psychotherapy; investigate clinical problems and develop methods of treatment. This field emphasises the diagnosis, causes, and treatment of severe psychological disorders and emotional troubles. Confusion between the fields of clinical psychology and psychiatry occurs because both clinical psychologists and psychiatrists provide psychotherapy. And both usually work together in many hospitals/clinics. That is why many people get confused regarding the difference between the two. Well, they belong to two different groups of professionals and differ in their educational background as well as ways of diagnosis and treatment. Psychiatrists are physicians. After completing their M.B.B.S., they do Doctor of Medicine (M.D.) in psychiatry and specialise in the treatment of mental disorders. Whereas, clinical psychologists hold a master's degree in M.A/M.Sc and/ or a doctorate degree (Doctor of Philosophy [Ph.D.] or Doctor of Psychology [Psy.D]) in clinical psychology. Because of this difference in training, clinical psychologists who do not have medical training, cannot prescribe drugs to treat behaviour disorders. Also, whenever there is a possibility of medical disorder, a patient should be examined by a psychiatrist or other physician. Moreover, mostly, only a psychiatrist can refer a patient to a hospital for treatment and care. Clinical psychologists carry out research to find out better ways of diagnosing, treating, and preventing psychological disorders. They also rely heavily on standardised tests for identifying the causes of these

disorders. They use psychotherapy, for which they are trained, for the treatment of mental disorders. But clinical psychologists are not authorised to prescribe drugs to treat behaviour disorders, as they do not have medical training. Also, they cannot refer a patient to a hospital, for care and treatment. Whenever there is a possibility of a medical disorder, a patient should be examined by a psychiatrist or other physician.

### **10.2.2 Counseling Psychology**

The work of the counseling psychologist is quite similar to that of the clinical psychologist. The difference between them is that counseling psychologists generally work with people who have milder emotional and personal problems. They may use psychotherapy in an attempt to help with these problems. But the main aim of their profession is to provide personal counseling to their clients; researches emotional disturbances and counseling methods. This branch deals with helping people/individuals with personal problems including interpersonal relations, career choice, mild emotional troubles or behavioural problems such as overeating, slow learning or lack of concentration. Counseling psychologists assist individuals having a specific problem like how to plan a career, how to develop more effective interpersonal skills (e.g. communication skills). Now a day, there are many specialised fields within the counseling psychology and experts are working as marriage counselors, family counselors, school counselors etc.

### **10.2.3 Health Psychology**

One of the emerging areas of psychology is health psychology- the scientific study of health, illness and health-related behaviours. The aim of health psychologists is to explore the factors affecting health behaviour and to use psychological principles to promote health and prevent illness. There is a separate division of health psychology in APA. According to American Psychological Association (APA), it is established “to advance contributions of psychology to the understanding of health and illness through basic and clinical research, education, and service activities, and encourage the integration of biomedical information about health and illness with current psychological knowledge” (APA, 2008). Health psychologists recognise that our emotions and behaviour plays a vital role in maintaining our health. For example, prolonged stress causes high blood pressure and increased heart rate. Therefore, a major thrust area of health psychologists is patient education-the process by which patients and their family members or caregivers are provided education to improve their health behaviours. One can find health psychologists in hospitals, clinics, working with government bodies and an independent researcher.

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## **10.3 WORK AND ORGANISATION**

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### **10.3.1 Engineering Psychology**

This field of psychology conduct applied research on the design of machinery, computers, airplanes, automobiles, and so on, for business, industry, and the military. Psychologists working in this field are also responsible for writing instruction manual in such a manner that can be understood by laypersons so that they can operate complex machinery and home appliances. As a branch of

applied psychology, this field has made important contributions to the field of engineering. Industrial psychologists have helped in designing the right type of machines which would make it possible for the workers to do their best by eliminating unnecessary operations, minimizing strain and eliminating possibilities of confusion and oversight. This aspect of adjusting the job to the employee is known as *human engineering*. Human engineering has played a major role in developing ultra-comfortable automobiles, aircraft, etc., in order to minimize stress-strain and maximize efficiency and work output.

### 10.3.2 Industrial/Organisational Psychology

Investigates all aspects of behaviour in work setting ranging from selection and recruitment of employees, performance appraisal, work motivation to leadership. The first application of psychology to the problems of industries and organisations was selection and recruitment of employees by using intelligence, aptitude tests. Nowadays, a number of companies are using modern versions of such tests in their programmes for hiring and selection of employees. Specialists in this field also apply psychology to problems related to management and employee training, leadership and supervision, communication, motivation, inter- and intra-group conflict within the organisation. They organise on-the-job training programmes for improving work environments and human relations in organisations and work settings. These psychologists are sometimes called *personnel psychologists*.

### 10.3.3 Consumer Psychology

Another field of psychology which focuses to help organizations by understanding the psychology of their consumers and thus increasing their sale is known as consumer psychology. Every industry depends on its ability to sell its products, not only for its survival but also for its growth and expansion. Therefore, it is important to know the needs, likes, dislikes, preferences, and habits of people who buy these products. In a watch company, the product in-charge for a new range of watches which were believed to be exquisite took informal feedback from their own friends and peers within the company. What they omitted to do was to check formally with consumers. They went ahead with production. But, they had unsold inventory for many months because consumers rejected it, the chief reason being difficulty in reading time on those beautiful dials. Somewhere, in that quest to deliver cutting-edge, perhaps, they had forgotten the basics. This highlights the importance of *consumer psychology*, yet another branch of psychology, which not only attempts to understand consumer needs and preferences through consumer surveys but also contributes to the field of advertising. Effective advertisements help industries to influence consumers to buy their products. Psychologists have been helping in designing advertisements which would attract the attention of consumers and effectively convey the messages so that they are motivated to buy the products.

#### Self Assessment Questions (SAQ I)

State whether the following are 'True' or 'False':

- 1) The engineering psychology conduct applied research on the design of machinery, computers, airplanes, automobiles. ( )
- 2) The aim of health psychologists is to use psychological principles to promote health and prevent illness. ( )

- 3) The main aim of clinical psychologists is to provide personal counseling to their clients; emotional disturbances and counseling methods. ( )
- 4) The branch of psychology which helps law enforcing agencies in crime scene investigation is known as Forensic psychology. ( )
- 5) Clinical psychologists are authorised to prescribe drugs to treat behaviour disorders. ( )

## 10.4 EDUCATION AND SPORTS

### 10.4.1 Educational Psychology

Education is, perhaps, one of the oldest sciences with which psychology has been intimately connected. The field of education is primarily concerned with the development of effective approaches and techniques for imparting knowledge and skills which would make the people personally successful and happy and socially productive. Needless to say, in striving to achieve these, educators have to take into account psychological factors such as the nature of the learning process abilities of individuals, their needs and proper methods of teaching among other factors.

Educational Psychology investigates classroom dynamics, teaching styles, and learning; develops educational tests, evaluates educational programs. It investigates all aspects of the educational process ranging from curriculum design to techniques of instruction to learning disabilities. This branch deals with the broader problem of increasing the efficiency of learning in school by applying psychological knowledge about/of learning and motivation to the curriculum. Educational psychologists have made extensive contributions by developing a wide variety of tests which help the educator to measure the abilities of pupils, their inclinations, and choose the proper educational levels and situations. Psychological theories of motivation have contributed to work out techniques of motivating students for improving their learning. Researchers in the psychology of perception, learning, and communication have contributed to evolving effective methods of teaching, preparation of useful teaching aids etc. Thus, one can see that the relationship between psychology and education is very intimate.

### 10.4.2 School Psychology

Another specialised sub-field of educational psychology is known as *School Psychology*. These psychologists do psychological testing, referrals, emotional and vocational counseling of students; detect and treat learning disabilities, and help improve classroom learning. The job of school psychologists includes diagnosing learning difficulties and trying to remedy them.

### 10.4.3 Sports Psychology

According to the European Federation of Sports Psychology (FEPSAC) sports psychology is the “study of the psychological basis, processes, and effects of sport” (1996). To register oneself as a sports psychologist, “one needs either a first degree in psychology and a higher degree in sports science *or* a first degree in sports science and a higher degree in sports psychology” (Jarvis, 2006). Broadly,

the work of sports psychologists can be categorized into three domains; (1) conducting *research* to investigate various psychological aspects of sports, (2) imparting *education* among students, officials and sportspersons about the recent findings of research and, (3) *applying* principles of sports psychology in assessing and intervening in any psychological problems faced by athletes.

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## 10.5 CRIMINAL AND FORENSIC

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### 10.5.1 Forensic Psychology

Forensic psychology is the intersection between psychology and the criminal justice system. It involves understanding criminal law in the relevant jurisdictions, in order to be able to interact appropriately with judges, attorneys, and other legal professionals. An important aspect of forensic psychology is the ability to testify in court, reformulating psychological findings into the legal language of the courtroom, providing information to legal personnel in a way that can be understood. A forensic psychologist can be trained in clinical, social, organisational or any other branch of psychology. Generally, a forensic psychologist is designated as an expert in a particular jurisdiction. The number of jurisdictions in which a forensic psychologist qualifies as an expert increases with experience and reputation.

Questions asked by the court of a forensic psychologist are generally not questions regarding psychology but are legal questions and the response must be in a language that the court can understand. Forensic psychologists provide sentencing recommendations, treatment recommendations, and any other information the judge requests, such as information regarding mitigating factors, assessment of future risk, and evaluation of witness credibility. Forensic psychology also involves training and evaluating police or other law enforcement personnel, providing law enforcement with criminal profiles and in other ways working with police departments. Forensic psychologists work both with the Public Defender, the State Attorney, and private attorneys. Forensic psychologists may also help with jury selection. A whole range of topics like criminal profiling to psychopathic personality to eyewitness testimony, to mental and emotional states of victims/witnesses, to decision making in the process by the jury members and judges etc., are studied by forensic psychologists. The findings of these researches have been very helpful for the legal system to do justice to the innocent and punish the guilty.

### 10.5.2 Criminal Psychology

Another field similar to forensic psychology is criminal psychology. The aim of these psychologists is to uncover psychological factors and motivation behind a criminal behaviour. A criminal psychologist is responsible for developing criminal profiling or offender profiling—a technique to analyse a criminal's psychological and behavioural pattern, in order to identify whether a crime was committed by the same perpetrator or the new criminal.



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## **10.6 ENVIRONMENT**

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### **10.6.1 Environmental Psychology**

It is a relatively recent field of psychology. The focus of the investigation of environmental psychology is the interrelationship between the physical environment and human behaviour and experience (Holahan, 1982). Since its inception, environmental psychology has attracted scholars, researchers, and practitioners from a variety of disciplines, including sociology, geography, anthropology, medicine, architecture, and planning, as well as psychology (Craik, 1970; Prashanky and Altman, 1979). The study of human behaviour in physical settings requires the work of researchers in many social sciences as well as that of architects and planners responsible for the design of the design of human settings.

Researchers in environmental psychology investigate a wide range of questions that involve psychological content—spatial behaviour patterns, mental images, environmental stress, attitude change. The researchers themselves, however, represent many disciplines including psychology. Research in environmental psychology is oriented toward both the resolution of practical problems and the formulation of a new theory. Environmental psychologists have worked in such topics as environmental perception, environmental cognition, environmental attitudes, performance in learning and work environment, coping with environmental stress, coping with crowding, privacy, and territoriality, personal space, affiliation and support in the urban environment. These have applications to environmental planning, for example, reducing urban noise, designing for the elderly, design strategies in dense environments, territoriality in institutional environments, humanizing the design of high-rise housing, citizen participation in urban planning etc.

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## **10.7 MILITARY AND AVIATION**

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### **10.7.1 Military Psychology**

Since the beginning of Global War on Terrorism in 2011 and increased terrorist activities worldwide, the level of physical, emotional and psychological injuries incurred by military personnel has increased multiple times. In such a situation, the role of military psychologists has become more challenging. One can define military psychology as the application of psychological principles in a military setting. One of the primary goals of these psychologists is to improve the betterment of army personals and their family members. The role of the military psychologists also involves performing psychiatric evaluations; assessing and treating mental and emotional disorders; and offering counseling services. The major activities conducted by military psychologists include doing research, providing mental health service, teaching, assessment, and selection of military officers and, coordinating with military organisation and advising government officials.

### **10.7.2 Aviation Psychology**

Related to the field of human factor psychology, it is one of the recent and least known applied areas of psychology. Studies have suggested that commercial

airline pilots have one of the most stressful jobs in the world. In the United States of America, it has been recognised as the 4<sup>th</sup> most stressful job. “... aviation psychology encompasses research on the design of aircraft, particularly cockpit displays and controls, the study of the perceptual and cognitive processes associated with flying, work on the selection and training of pilots and ground personnel, and the development and testing of procedures for operating, maintaining and tracking aircraft” (Kearsley, 1981, p. 10). Thus, the role of an aviation psychologist is to help authority in recruiting pilots and helping engineers to design pilot-friendly cockpit display.

**Self Assessment Questions (SAQ II)**

Fill in the blanks:

- 1) ..... refers to the application of psychological principles in a military setting.
- 2) Research in ..... psychology is oriented toward both the resolution of practical problems and the formulation of a new theory.
- 3) A ..... is responsible for developing criminal profiling or offender profiling-a technique to analyse a criminal’s psychological and behavioural pattern.
- 4) The work of sports psychologists can be categories into ..... domains.
- 5) Educational Psychology investigates .....

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**10.8 LET US SUM UP**

In this Unit, the application of psychology in various fields was discussed. First, you came to know about the applicability of psychology in the field of clinical and health. And then you were acquainted with the use of psychology in the workplace and organization. This unit covered many applied fields which included education, sports, criminal, forensic, environment, military and aviation.

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**10.9 UNIT END QUESTIONS**

- 1) What is the difference between a psychologist and a psychiatrist?
- 2) Elaborate on the role of psychologists in the fields of engineering psychology and organizational psychology.
- 3) Explain how psychologists can help the law enforcing agencies in dealing with the criminal?
- 4) What do you understand about environmental psychology?
- 5) Explain the role of military psychologists and aviation psychologists.

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**10.10 GLOSSARY**

**Clinical Psychology** : Clinical psychologists perform psychotherapy; investigates clinical problems and develops methods of treatment.



- Health Psychology** : It is the scientific study of health, illness and health-related behaviours.
- Sports Psychology** : It is the study of the psychological basis, processes, and effects of sport.
- Forensic Psychology** : It involves understanding criminal law in the relevant jurisdictions, in order to be able to interact appropriately with judges, attorneys, and other legal professionals.
- Military Psychology** : It is the application of psychological principles in a military setting.

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## 10.11 ANSWERS TO SELF ASSESSMENT QUESTIONS (SAQ)

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### Self Assessment Questions I

- 1) True
- 2) True
- 3) False
- 4) True
- 5) False

### Self Assessment Questions II

- 1) Military psychology
- 2) environmental
- 3) criminal psychologist
- 4) three
- 5) classroom dynamics, teaching styles, and learning; develops educational tests, evaluates educational programs.

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