UNIT 1 INTRODUCTION TO ASSESSMENT AND TESTING

Structure

1.0 INTRODUCTION

A pervasive theme in the study of personality is individual differences in people's behaviour and experience. In pursuing the study of individual differences – how are people different from one another – personologists deal with two related concerns. First, is the ways in which people are different. Personologists have used different theoretical concepts to describe the distinctiveness about an individual. Terms such as *trait, type, motive, value, temperament,* etc. have been used to depict enduring aspects of human behaviour. Second, personologists are interested in developing ways of measuring individual differences (a process called *assessment*).

Formal personality assessment not only makes it possible to obtain information about individual differences in a meaningful and exact manner but also makes it possible to communicate this information to others in a clear and unambiguous fashion. In this unit 1, we will be dealing with the historical perspectives of personality assessment and measurement, provide meaning and definition and description of personality assessment and follow it up by the reason for assessing personality. The assessment of personality is made through measuring social traits, motives, adjustment etc. Assessment has to be reliable and valid and in order to know how this is to be done, we will be learning in this unit how a test of personality or for that matter any psychological test is standardised, how norms

are developed and we would also learn what is reliability and validity and how these have to be calculated.

1.1 OBJECTIVES

After reading this unit, you will be able to:

- Define personality assessment;

- Describe the individual differences measured in personality assessment;

- Trace the history of personality assessment;

- Explain the meaning and purpose of personality assessment; and

- Describe the criteria for standardisation of personality assessment techniques.

1.2 HISTORY OF PERSONALITY ASSESSMENT

The ways in which people behave have always been of interest. They are of immediate interest to family, friends, and neighbours, for whom the behaviour of a certain person is likely to have direct consequence. Thus there have been many attempts by psychologists and experts to look for and devise instruments to assess personality.

As one traces the history of psychological testing it is interesting to see that as early as 1000 B.C., written tests were introduced by the Chinese in order to fill up civil service positions. In the United States around the year 1850 one finds tests for the civil services examinations starting. James Cattell in 1890 developed a mental test for assessing college students in order to measure their strength, resistance to pain and reaction time. As is well known the first scale of mental development for classifying the mentally retarded children in France was in the year 1905 and this scale originated from Binet and Simon and bears their name as Binet Simon scale of mental development. World War I required tests to quickly classify the new recruits to army and this was done through the Army Alpha and Beta tests, which were specially developed for this purpose in 1914.

It was in 1916 that the term Intelligent Quotient was introduced by Terman who developed Standford Binet Test after which came the many personality tests and inventories. Between 1920 and 1940 using factor analysis projective tests and personality tests were devised. Between 1941-1960 many vocational interest tests were developed and between 1961 – 1980 neuropsychological testing became prominent. Between 1980 to the present date many tests have been developed which could be administered through the computer, scored and also interpreted.

In regard to personality tests, as one traces the history, one finds that the first name is of a Greek physician Hippocrates. He was a departure from the spiritual side of human behaviours. He theorised that every boy has four fluids (humors); blood, phlegm (...respiratory secretions) yellow bile and black bile. He thought that these fluids affect human body in a number of ways. In 190 AD Galen, another Greek Physician put forward a theory of four body fluids and pointed out that based on the body fluids there are four temperaments, viz., sanguine, phlegm, choleric and melancholic. The sanguine person is supposed to be warm, optimistic and confident, while the phlegmatic body brings about a temperament

which is sluggish, apathetic and indifferent. The yellow bile according to Galen causes a choleric body and thus the temperament consists of violence, anger and aggression. The last one was the black bile body which causes the person to have a melancholic body and the temperament that goes with it includes, sadness, depression and melancholy. He also believed that food, weather, life-periods and geographical conditions affect body temperaments. He was of the view that a healthy body is the direct result of a balance in the ratio of these four body temperaments.

Avicenna, a Muslim physician not only introduced four body temperaments to the Arab world but also analysed many other reasons of human illness.

It was actually Wilhelm Wundt (1879 A.D.) who founded the first psychology laboratory in Leipzig Germany, was the first to make clear the distinction between human body and personality. He theorised that the four temperaments; sanguine, phlegm, cholera and melancholy are four dimensions of the human personality. He gave the psychological touch to the personality tests.

While the history of personality tests took a psychological turn with Wilhelm Wundt, many psychologists contributed to the personality assessment methods. Given below are some of the contributors who belong to the 20th century.

In 1905, Eduard Spranger, a German Philosopher, theorised four attitudes towards ethical values. He named those value attitudes as artistic, religious, theoretic and economic.

Hugo Munsterberg, a professor of the Harvard University made a survey and asked the executives of different organisations to respond. He asked them for qualities which they want to see in their employees. He listed them and devised the first personality test. He intended to help the employers to make the best hiring decisions.

Ernest Kretchmer (1920) , a German philosopher presented a theory of four character styles, viz., hypomanic, depressive, hyperesthetic or anesthetic depending upon their character styles.

Erich Fromm, another German philosopher wrote that there are four human orientation which he termed as exploitative, hoarding, receptive and marketing.

In 1922, Carl Jung, a Swiss psychologist, was the first person to theorise that people always prefer certain identifiable behaviours if they are given a free choice. He also said that on the basis of human preferences, they can be divided in different personality types. Based on this theorisation, two women psychologists, Myers Briggs and Katherine Briggs in the year 1958, applied Jung's theory and developed types of personality which were to be decided based on the answers to four questions which are as given below:

a) Preferred source of your energy? (Internal or external)

b) Preferred source of perception? (Senses or Intuition)

c) Preferred decision making system? (On logics or feelings)

d) Preferred life style? (ordered or adaptable)

On the basis of the answers received, they identified four cognitive functions; sensory perception, sensory judgment, intuitive feeling and intuitive thinking. Their theory influenced another psychologuist named Kiersy, who identified four personality temperaments. David Kiersy associated four temperaments with Myers Briggs four cognitive functions. He developed a personality assessment scale called as "Temperament sorter" which identified four personality temperaments viz., the guardian, the rational, the idealist and the artisan. A person having 'guardian' temperament will value responsibility and team membership. The person's core desires are security, service and system. Such a person is not only responsible towards his job and the organisation but also to his family and the society.

On the other hand, a person having 'rational' temperament will value knowledge, skill and intuitive evaluation. Such persons are analytical, experimental and factual. They not only understand abstraction but also can theorise it. Such a person is a knowledge seeker.

The 'Idealist' temperament person follows ideals and their intuitive and feeling preferences make them perform great tasks. They desire not only develop themselves but also people around them.

If Kiersey temperaments scale sorts a person an artisan, that person is expected to be action seeker. The core needs of such a person are action and variety. These persons prefer using their five senses to understand information. They are impulsive and spontaneous, dislike routines and schedules, but love freedom of action and experiments.

One can also see how personality assessments became more and more important especially in the work situations. For instance, the German government established a program for selecting officer candidates in the 1920s. By 1936, they had 15 psychological laboratories, with 84 psychologists, evaluating over 40,000 candidates per year. Thus, the Germans invented the modern assessment center in which 4 or 5 candidates are intensively evaluated with interviews and realistic job simulations for two days. At the end, a committee judged the potential of each candidate. The German method examined the "total personality" and produced an overall evaluation of suitability.

Historically, one finds the English selecting military officers using interviews focusing on a candidate's social class-the higher, the better. When the war started, the supply of upper class candidates was quickly exhausted. The British government then established War Office Selection Boards (WOSB)-assessment centers modeled on the German method. They compared their traditional interview with the WOSBs, and found the assessment centers were superior at identifying good leaders in combat.

1.2.1   The OSS

The U.S. was unprepared for World War II. To enhance its intelligence capabilities, Congress created the Office of Strategic Services (OSS) in 1942; William Donovan, a World War I hero and Wall Street banker, was the director. Donovan and Murray used the German assessment center to screen applicants for the OSS. The Assessment of Men (1948) provides evidence regarding the effectiveness of this process.

Three points about this assessment tradition should be noted.

1) It selected candidates based on evaluations of competence and not the absence of psychopathology.

2) Researchers consistently evaluated the validity of their process.

3) It was demonstrated by Eysenck in 1953 that the one hour of paper and pencil testing yielded results fully comparable to those obtained from the two and one half day assessment center. The same would be true today.

Thus from the above one can state that from the beginning of personality measurement in the 19th century and for the next 75 years, a large number of personality assessment scales were devised to measure a large number of personality concepts. The relatively more recent ' Five Factor Model' personality assessment scale showed that there was a surprising degree of order beneath these personality assessment tests. This predicts occupational performance as well as measures of cognitive ability. In this context, Murray Barrick and Michael Mount showed that personality measures, organised in terms of the Five-Factor Model, predict occupational performance across a wide range of jobs and industries.

1.2.2 Important Steps in Personality Assessment

There are two important steps in personality assessment which are given below.

Step 1. Stipulate the agenda for personality assessment. The agenda for personality assessment concerns forecasting individual differences in a person's potential for getting along and getting ahead.

Step 2. It must be decided as to which aspect of personality one wants to measure. If one wants to assess personality from the inside identity, then a measure of values is needed. This would help to evaluate how well a person will fit into the culture of a specific organisation, as opposed to trying to predict occupational performance. If, however, one wants to assess personality from the outside reputation then one should use observer ratings (e.g., a 360-degree feedback instrument). The optimal use of assessments of reputation is to forecast occupational performance, as opposed to trying to predict person/culture fit.

If the foregoing distinctions are appropriately observed, personality and personality assessment will be indispensable tools for making decisions about people in organisations.

1.2.3 Personality Assessment and Related Fields

Astrology, palmistry, and phrenology are considerably older than any current professional assessment techniques.

Astrology: This is a field in which the personality of the individual is predicted on the basis of the date of birth, place of birth and the time of birth. At the time the person is born, the planetary positions are determined and based on these the individual's personality and the future of the person are predicted. Such attempts to forecast events on earth through observation of fixed stars and other heavenly bodies, is thought to have originated twenty-five centuries ago in Mesopotamia. Their belief that the stars were powerful Gods, led the ancients to conclude that human affairs could be foretold by study of the heavens. Personality and the

course of events in each individual's life were determined by consulting a horoscope. The notion that human lives are predicted by the configuration of the stars at the moment of birth seems though extremely naïve, lots of work and teaching are continuing on in this field.

Biorhythms: Analogous to astrology is the technique of biorhythm, a method for personal prediction developed initially by Wilhelm Fleiss, a colleague of Sigmund Freud and promoted by George Thommen(1973). According to this theory, day-to-day effectiveness is governed by a position on three "cycles", viz., physical, emotional, and mental – that are fixed according to the moment of birth and are not otherwise modifiable. Because each of the cycles has a different period, they can periodically combine to produce "triple low "days, on which things are likely to go badly, and "triple- high" days, when the opposite will be true.

Palmistry refers to the determining of an individual's character by interpreting the various irregularities and the folds of the skin of the hand. It is known to have existed as a standardised system in China as early as 3000 B.C.

Humoural theory: The search for clear- cut relation between the physical attributes of an individual and his/her psychological characteristics has been continual. This concern had an early expression in the *humoural theory*, that remained current through middle-ages.. This theory proposed four 'ingredients': blood, phlegm, yellow bile(choler), and black bile(melancholy). The particular proportion of these four ingredients in different people determine their complexions (or personality characteristics), their physical, and mental qualities and their unique dispositions. It was therefore claimed that, by reading physical signs of the relative amounts of these humours in a given individual, his/her distinctive personality can be determined.

Somatotype theory: The humoural theory came into disuse, with the assumption that human personality is a reflection of physical body. This has been suggested in the seminal work of Sheldon and his colleagues whose theory of *somatotypes* divides people into three major types: the ectomorph, who is thin and fragile; the mesomorph, who is powerful and muscular; and the endomorph, who is round, soft and fat. According to the theory, each of these ideal types has a specific personality that has an innate consequence of that particular body build. Because most individuals have a combination of these three body types, the personality characteristics are determined by the relative proportions of the body type factors in their individual somatotype.

Self Assessment Questions

1) Define and describe personality assessment.

....

....

....

....

....

....

2) Trace the history of personality assessment.

....

....

....

....

....

3) Discuss Jung's contribution to personality testing.

....

....

....

....

....

4) What is OSS? Discuss its needs and how it is used as personality assessment?

....

....

....

....

....

5) Discuss how personality assessment is related to other fields such as astrology, biorhythm, humorology and somatotype theories?

....

....

....

....

1.3 INFLUENCE OF PSYCHOLOGICAL ASSESSMENT

Scientific personality assessment has its roots in the study of individual differences through psychological measurement. The study of individual differences was given considerable impetus by Darwin's work on evolution. Sir Francis Galton, A famous British scholar of the 19th century, became interested in the inheritance of differences and devoted the later portion of his life to their study.

The study of individual differences in the U.S. was pioneered by James Mckeen Cattell. Although, his interests were mainly in the area of psychophysics, perception, and reaction time, Cattell had a strong influence on the development of other psychological measurement devices, including personality tests.

At about the same time in France, Alfred Binet , who had become enthusiastic about Galton's work on individual differences , began a series of studies of eminent persons in the arts and science. Binet used a standardised series of experimental tasks, including observation on body types, head measurement, and handwriting. He also began a series of investigation into mental functioning (which includes personality), using a wide variety of tasks involving word knowledge, reasoning and numerical ability. These investigations led to the development of now famous Binet Tests of intelligence. Some of the tasks in the tests, involved telling stories about pictures and identifying inkblots, which all paved way for the emergence of 'projective' tests of personality.

Thus, prior to 1915, research on the measurement of personality was preceded by work on the measurement of skills or abilities, it grew out of the early academic interests in the measurement of human individual differences. Galton had introduced the use of direct behaviour samples in real life situations, and his work had stimulated considerable interest in both U.S. and France. Two of Galton's followers, Karl Pearson and Charles Spearman, played a major part in the development of statistical procedures that provided powerful tools for later work in assessment.

1.4 MEANING AND PURPOSE OF PERSONALITY ASSESSMENT

1.4.1 Meaning of Personality Assessment

The term "personality" refers to the total functions of an individual who interacts with the environment. Such definition automatically includes all traits as the main themes of the personality. The purpose of the measurement of personality is to describe a person in terms of some of the measurable factors such as the traits. Trait is nothing but the observed consistency of behaviour of a person. Traits are not directly observed but inferred from the consistent behaviour of an individual. The most general cues to traits are what and how the person does, has well how well the task is done by the individual. .

1.4.2 Purpose of Personality Assessment

Nunnally (1979: P.354) has opined that personality measurement aims at studying the four broad types of traits, viz., social traits, motives, personal conceptions and adjustment. These are being discussed in the following section.

Social traits

Social traits are those traits, which determine how persons interact with other persons in society. Examples of typical social traits are friendliness, honesty, dominance, responsibility, shyness, etc. Thus, within social traits are included traits related to temperament and character.

Motives

Motives here include the non-biological drives such as the need to earn money and prestige, need for the academic, achievement, need for affiliation, aggression, etc. These non- biological needs are often said to constitute what is known as *personality dynamics*.

Under the trait of personal conceptions are included those methods which determine people's attitude toward self and others, a person's values, interests, etc.

Adjustment

Adjustment in psychology refers to the establishment of a satisfactory relationship representing harmony, conformance, adaptation or the like. It is a process of finding and adopting modes of behaviour suitable to the environment or the change in the environment. Adjustment is the process by which a living organism maintains a balance between its needs and the circumstances that influences the satisfaction of these needs. Adjustment includes traits like the freedom from emotional worries or instability and other related aspects of behaviour.

One general characteristic of these four types of traits is that they are correlated with each other, that is they are not independent. For instance, a social trait, say dominance, is likely to influence motives, personal conceptions (interests, attitudes) and adjustment. Similarly, an individual's motive is likely to influence the interaction of the person with others in society (social traits). It would also include the individual's personal conceptions and adjustment. To cite an example, let us say an individual is highly prejudiced against a particular caste (personal conception). In such cases, the individual's social interaction, motives, and adjustment all would be similarly affected. Likewise, if a person has a satisfactory general adjustment, That person's social traits, motives and personal conceptions would be in congruence with social norms. On the other hand, if an individual is maladjusted, s/he would have extreme social traits, eccentric motives and personal conceptions.

Self Assessment Questions

1) How does psychological assessment influence personality assessment?

....

....

....

....

2) Discuss the meaning and purpose of personality assessment.

....

....

....

....

3) Discuss the four broad types of traits which can be measured.

....

....

....

....

1.5 TESTING AND MEASUREMENT CONCEPTS

Assessment techniques must meet four technical criteria before they can be considered scientifically acceptable measures of individual differences in people's enduring qualities. These criteria are standardisation, norms, reliability, and validity. Let us deal with each of these and understand what these terms mean.

1.5.1 Standardisation

A key concept in the measurement of personality dimensions is that of *standardisation*. This concept refers to the uniform procedures that are followed in the administration and scoring of an assessment tool. For instance, in self-report scale, the examiner must make every effort to ensure that subjects read and understand the printed instructions, respond to the same questions, and stay within any stated time limits. It also involves information (in the manual) about the conditions under which the assessment test should or should not be given, who should or should not take the test (sample group), specific procedures for scoring the test, and the interpretative significance of the scores.

1.5.2 Norms

The standardisation of a personality assessment test includes information concerning whether a particular "raw score" ranks low, high, or average relative to other "raw scores" on the test. Such information, called *test norms*, provides standards with which the scores of various individuals who take the test later can be compared. Usually, the raw scores on a test are converted into percentile scores, which indicate the percentage of people who score at or below a particular score. Thus, test norms permit the comparison of individual scores to a representative group so as to quantify the individual's relative rank standing to others.

1.5.3 Reliability

Any test whether personality or intelligence or aptitude etc., should have reliability and this should be demonstrated. Reliability means that repeated administrations of the same test or another form of test should yield reasonably the same results or scores. Thus, reliability refers to the consistency or stability of an assessment technique when given to the same group of people on two different occasions. This kind of reliability is termed as *test- retest reliability* (Anastasi, 1968) .

To determine test- retest reliability, the scores from the first administration are correlated with those of the second by a simple correlation procedure. The magnitude of resulting correlation coefficient gives us an estimate of the test's consistency over time. Although there are no fixed guidelines about acceptable levels of reliability, the reliability coefficients for most psychological tests are above +.70. The closer this statistic approaches +1.00, the more reliable the test is. In other words, when retested, people's scores should match their first scores quite closely.

A second kind of reliability is determined by splitting the test into two sets (e.g., odd-numbered items versus even- numbered items), summing people's scores for each set, and correlating the two sets of summed scores with each other. The correlation between these sets is termed *split- half reliability* and reflects the

test's internal consistency. If the composite set of test items is consistently measuring the same underlying personality dimension, then people who score high on odd items should also score high on even items, and people who score low on odd items should also score low on even items (again reflected in a high positive correlation) .

A third type of reliability is based on the correlation of two versions of the same test (made up of similar items) administered to same group of individuals. If the scores on these different forms are about the same, the test yields *reliability of parallel forms*. In such a case, the correlation of two parallel forms would indicate that the items on both tests measure the same thing.

Lastly, reliability also applies to the degree of agreement between two or more judges in scoring the same assessment test. This is called *inter scorer reliability*, *and* must be demonstrated whenever scoring involves subjective interpretations, such as those made by personologists examining projective data. Inter scorer reliability tends to be especially low with qualitative data in general, such as interview conversations, dream reports, and other open ended response formats that are not objectively quantified. But, agreement is increased when judges use manuals with explicit scoring rules and instructions for analysing such data (Yin, 1984).

1.5.4   Validity

Whether or not a test measures what it is intended to measure or predicts what it is supposed to predict, is known as validity. It is another significant concept in personality assessment. There are three main types of validity: (1) Content validity, (2) Criterion- related validity, (3) Construct validity.

To be *content valid*, an assessment tool must include those items whose contents are representative of the entire domain or dimension it is supposed to measure. For instance, a personality test measuring shyness, should actually reflect the personal ("Is your shyness a major source of personal discomfort?"), Social ("Do you get embarrassed when speaking in front of a large group?"), and cognitive ("Do you believe that others are always judging you?") aspects of shyness. A content valid test would assess each of these components defining the construct of shyness. Content validity is almost entirely determined by agreement among experts that each item does in fact represent aspects of the variable or attribute being measured.

For *criterion related validity*, personality assessment is commonly undertaken for the purpose of making predictions about specific aspects of an individual's behaviour. For example, the behavioural criterion being predicted may include academic performance in management school, occupational success. The extent to which a test accurately forecasts some agreed- upon criterion measures determined by correlating subject's scores on the test with their scores on independently measured criterion. For instance, the criteria is success in management school as measured by management school grade point average (GPA).The Common Aptitude Test would be validated if it accurately predicted the criterion(management school GPA).

There are three types of criterion related validity.

i)   Predictive validity

ii) Concurrent validity

iii) Construct validity

Predictive validity involves determining the capacity of a test to predict some criterion behaviour in the future. For instance, an intelligence test has predictive validity if it accurately predicts subsequent performance in school.

Concurrent validity involves determining the extent to which a test correlates significantly with another currently derived test from a theory or existing criterion measure. For instance, if a person's scores on a test that measures paranoid tendencies is assessed by clinical psychologists, and the test also shows paranoid tendencies as was obtained in the interview, then we would say that concurrent validity exists. But the clinicians must not have prior knowledge of the patient's paranoid test scores. Otherwise, their ratings may be biased by their knowledge, a situation called criterion contamination.

Construct Validity: The third type of measurement validation, and the one most crucial to personality assessment as a whole, is called *construct validity*. The concept of construct validity addresses the question of how well a test measures something that, in reality, is but a useful abstract invention (Cronbach & Meehl, 1955).

The abstract nature of many psychological constructs such as self- actualisation, ego- identity, social interest, and repression, makes this approach complicated and results uncertain.

Construct validation is the process whereby evidence is gathered to demonstrate that a test measures a hypothetical construct. It is a laborious process requiring several studies that examine the correlations between test scores and measures assumed to be related to the construct in question.

Convergent Validity

In order to demonstrate that a test measures a construct, we can correlate test scores of the construct in question with scores from another test that purportedly measures the same construct. This procedure is known as *convergent validation* (Campbell & Fiske, 1959).

For instance, we have a new test that we think measures the construct of self-esteem. If our new test does measure the construct of self-esteem, it should correlate positively with another established and validated measure of self- esteem.

Also, if several different self-esteem measures agree with each other and with our new test, we have some evidence for the construct validity of our new test of self- esteem.

Divergent validity

Another way to demonstrate construct validity is to show the assessment tool does not correlate with measures of qualities that it was not intended to measure, particularly the qualities unrelated to the conceptual definition that the theorist

formulated. This aspect of the validation process is termed as *divergent validity* (Campbell & Fiske, 1959).

For instance, if our new self-esteem test does not correlate with measures of other, conceptually distinct qualities, we have evidence of discriminate validity (since our self-esteem measure is discriminated from non- self- esteem measures, as it should be).This is an important step in establishing the construct validity of an assessment technique.

Self Assessment Questions

1) What is meant by standardisation?

   ....

   ....

   ....

   ....

   ....

2) What are norms? How are they established?

   ....

   ....

   ....

   ....

   ....

3) What is relaiability?

   ....

   ....

   ....

   ....

   ....

4) What are the different ways in which treliability could be tested?

   ....

   ....

   ....

   ....

5) What is Validity?

   ....

   ....

   ....

   ....

---

6) What are the types of validity testing?

   ....

   ....

   ....

   ....

   ....

7) Differentiate between convergent and divergent validity.

   ....

   ....

   ....

   ....

   ....

1.6 LET US SUM UP

The ways in which people behave have always been of interest to significant others, as well as for whom the behaviour is likely to have direct consequences. Personality assessment involves systematic efforts to understand and predict behaviour of an individual. It has a long history, that can be traced from astrology, palmistry, biorhythms, and the like. Personality refers to the total functions of an individual who interacts with his environment. The purpose of the measurement of personality is to describe a person in terms of traits. And traits are referred as observed consistency of behaviour in an individual. Hence, personality measurement aims at studying the four broad types of traits , namely, social traits, motives, personal conceptions, and adjustment. Lastly, an assessment technique must meet four criteria before they can be considered scientifically acceptable measures of individual differences. These are standardisation, norms, reliability, and validity.

1.7 UNIT END QUESTIONS

1) Discuss the meaning and purpose of personality assessment.

2) Trace the historical development of personality assessment.

3) What is meant by standardisation? Discuss the important aspects related to standardisation.

4) Describe the four technical criteria to consider assessment technique as scientifically acceptable measure.

1.8 GLOSSARY

Assessment	:	The measurement of individual differences having to do with various personality traits.
Concurrent validity	:	Degree to which a test correlates with an independent measure of the same characteristics or variables obtained at the same time.

Construct validity	:	Extend to which there is evidence that a test measures a particular hypothetical construct; involves validation of both the test and theoretically related characteristic that underlies it.
Content validity	:	Degree to which a test includes items that is relevant to the variable being measured.
Convergent validity	:	Degree to which a test correlates with another test that supposedly measures the same characteristics or construct in question.
Divergent validity	:	The degree to which a test does not measure qualities it was not intended to measure.
Palmistry	:	Determining of an individual's character by interpreting the various irregularities and the folds of the skin of the hand.
Predictive validity	:	Degree to which a test can accurately predict some criterion related measure in the future.
Reliability	:	The measurement of consistency or stability of a test (or other kind of measurement technique). The consistency of scores when a test is administered repeatedly to the same group of people is called test – retest reliability. The consistency of scores across items within a test is called split half or internal reliability.
Standardisation	:	The use of uniform procedures in the administration and scoring of a psychological test.
Test norms	:	Established standards of performance for a test (e.g., mean, median, and percentile).
Validity	:	Degree to which a test measures what it aims to measure.

1.9   SUGGESTED READINGS AND REFERENCES

Anastasi, A. (1968). *Psychological Testing*. London: Macmillan Company.

Campbell, D.T. & Fiske, D.W. (1959). Convergent and discriminate validation by the multi trait multi method matrix. *Psychological Bulletin*, 56, 81-105.

Nunnally, J. C. Jr. (1959).*Tests and Measurements: Assessment and Prediction*. New York:Mcgraw -Hill Book Co.

References

Hjelle, L. A. & Zieglar, D.J. (1992).Personality Theories. Basic Assumptions, Research, and Applications. McGraw Hill Book Co.

Lanyon, R. I. & Goodstein, L.D.(1997).Personality Assessment.3rd edition. John Wiley & Sons.

Singh, A. K. (1997). Tests, Measurements and Research Methods in Behavioral Sciences. Bharti Bhawan, Patna.