

PSYCHOLOGICAL TESTING AND ASSESSMENT IN THE MILITARY

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Abstract

Psychological testing and assessment is one of the most important contributions of psychology to the military. The efficacy of testing and assessment in predicting and optimizing military goals were experienced during both World War I and II. Ever since, more advances and applications of psychological techniques gave rise to the official launching of an area of psychology called Military Psychology. This field has helped in describing, explaining, predicting and modifying military behaviors. Specifically, psychological testing and assessment is used in selection, placement, promotion and diagnosis in the military.

Keywords: Psychological testing, Assessment, military psychology

INTRODUCTION

Psychology is generally referred to as the scientific study of human and animal behavior and mental processes which has the following major objectives; describing human behavior, explaining human behavior, predicting human behavior and changing or modifying human behavior when necessary. Every aspect of human life needs psychology because everything humans do is a type of behavior and many fields of psychology (e.g. political psychology, health psychology, clinical psychology, school psychology, and military psychology) try to explain behavior in specific contexts.

Specifically, in the military context, many authors have tried to define psychology. Cronin (1998) stated that military psychology is the application of psychological principles to the military environment regardless of who is involved or where the work is conducted. This definition draws attention to the fact that military psychology is not for military personnel only, but for all those who are interested in the application of psychological knowledge in the military. Similarly, Mangelsdorff and Gal (1991), Walters (1968) defined military psychology as the application of research techniques and principles of psychology to the resolution of problems to either optimize the behavioral capabilities of one's own military forces or minimize the enemies' behavioral capabilities to conduct war. This definition draws out the main objective of military psychology which is to use psychological techniques in offering solutions to the problems faced by military personnel. These psychological techniques may include psychological testing and assessment which are utilized in describing, explaining, predicting and modifying behaviors that help military personnel to optimize their performance.

Psychological testing is defined as the process of administering, scoring and interpreting psychological tests (Maloney & Ward, 1976). Psychological tests are tools that psychologists use to collect data about behavior and mental processes of people (Groth-Mamat, 2009). In other words, a psychological test is an objective procedure for sampling and quantifying human behavior and mental processes to make an inference about a particular psychological construct using standardized stimuli and methods of administration and scoring.

Psychological assessment on the other hand is "the gathering and integration of psychology-related data for the purpose of making a psychological evaluation that is accomplished through the use of tools such

as tests, interviews, case studies, behavioral observation and specially designed apparatus and measurement procedures". (Cohen & Swerdlik, 2010). It is important to note that psychological testing is the most reliable technique of psychological assessment. Some of the differences between psychological testing and assessment are seen in their objective, process, role of evaluator, skill of the evaluator and outcome of the process (Cohen & Swerdlik, 2010). For instance, why the main objective of testing is to obtain some gage, usually numerical in nature, with regard to an ability to attribute, the main objectives of assessment is to answer a referral question, solve a problem, or arrive at a decision through the use of tools of evaluation.

Because of their defining characteristics, psychological tests are usually the first line of action in any psychological assessment processes. These defining characteristics include the following:

Psychological tests are sample of behavior that are used to make inferences about the individual in a significant social context.

They involve objective procedure.

The results of psychological tests are summarized quantitatively in terms of scores. Psychological tests must meet a number of criteria to be '3' useful information gathering device (psychometric properties).

The origin of military psychology cannot be complete without mentioning the contribution of psychological testing. Specifically psychology made significant impact in the military during the first and the second world wars in the areas of using psychological testing and assessment techniques in the selection and classifications of military recruits; testing of the intelligence of the military personnel for special assignments, strengthening the morale of soldiers to raise their fighting spirits and helping soldiers to recover mental functions lost after injury or combats (Zinchenk, Veraksa & Leonov, 2011).

Consequently, between 1944 and 1946 American Psychological Association included military psychology as one of the departments in the Association. This action has since encouraged research and innovative application of psychological concepts within the military context.

In Nigerian military context, prior to 1956 - 1960, what is known today as the Nigerian Armed Forces (NAF) was a Nigeria regiment of the Royal West African Frontier Force (RWAFF) controlled by the British government. Since its inception the Nigeria Armed Forces have been involved in many activities and prominent among these activities include the following: between 1966 to 1999 ten military coups took place in Nigeria and two of these coups involved seizing political power from the civilian government; the Nigerian armed forces have also fought a civil war, 1967 - 1970 and have participated in several international peace keeping missions (e.g. Liberia, Sierra Leone, Congo, South Sudan and Northern Mali) and presently they are involved in fight against the Boko Haram insurgency in the North Eastern Nigeria. Some of the flaws for which the Nigerian Armed Forces are criticized include to poor selection, training, placement and deployment of military officers. The understanding of the main functions of the military will further the understanding of the techniques involved in selection and training of the military personnel. The main functions of Nigerian Armed Forces as stipulated in the section 217 of the 1999 constitution of Nigeria include

- To defend Nigeria from external aggression.
- To maintain Nigeria territorial integrity and secure its borders from violation on land, sea or air.
- To suppress insurrection and act in aid of civil authorities to restore order when called upon to do so.

The Nigeria Armed Forces has three main branches namely-

- The Nigerian Army (NA) which is the land branch.
- The Nigerian Navy (NN) which is the sea branch of the Nigerian Armed Forces.

- The Nigerian Air Force

Nigerian citizens who are interested in joining the military can join as trades' men/women or non-trades men/women recruit or as a cadet officers. For cadets' category an individual can enlist for Army Wing, Naval Wing or Air force Wing as either Regular Combatant (RC) or Short Service (SS) or Direct Short Service (DSS). The minimum requirement for commissioned cadet is university degrees or equivalents, while the minimum requirement for recruit is senior secondary school certificate or equivalents. There are selection procedures for joining the Nigerian Armed Forces at any level either as recruits or cadet officers. These selection procedures among other processes involve some types of psychological testing and assessment.

The present paper explores an aspect of psychological techniques, "psychological testing and assessment" and examines their utility in the military. Special focus is on Nigerian military. The paper is divided into three major sections, the introduction: definitions of military psychology, psychological testing and assessment and characteristics of psychological testing; application and types of psychological testing in the military; and conclusion.

Application of Psychological testing and Assessment in the Military

The utility of psychological testing and assessment in the military is a "continuum". It starts during selection for recruitment into the military and spans till retirement from the active service in the military. In between these periods, psychological testing and assessment are utilized in promotion, placement, special military mission, diagnosis and treatment for officers with psychopathology. However, testing and assessment are commonly applied in military selection, training and placement more than any other area.

Most military selection are large scaled and are influenced by societal situation such as special mission, peace or conflict periods. Devriendt (2003) noted that the nature of psychological tests and assessment utilized in the military are influenced by the targeted competencies or abilities a recruit or cadet must possess to do well in the military context and these competencies include

- The ability to overpower people physically and psychologically.
- The ability to live with the permanent threat to be killed, injured or taken prisoner.
- The ability to obey unconditionally in response to orders from above.

Also the main purposes of utilizing psychological testing and assessment in the military include the following

- To classify prospective applicants according to their mental ability so that further placement could be easy.
- To provide the personnel officers with mental rating for each soldier which will help in building and organization of the military arena.
- To assist officers in charge of military human resource development with classification, grading, training, and ultimate assignment of soldiers.
- To assist in discovering soldiers of superior mental ability who should be selected for officers' training camps, for promotion, or for assignment to special tasks.

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However, military selection takes different format and processes. The format may be categorized into three and they include:

- Uniform format: This is where all candidate for military course take the same test batteries
- Diversified format: This is where candidates for different military course are given different test battery according to the course.
- Mixed format: This is where the entire candidates are firstly given a uniform test battery and then subsequently given specific test battery according to their chosen course.

The processes involved in the military selection include three steps and they are

- Administrative Assessment: This process involved the fact that every candidate for recruit or cadet course must meet certain legal criteria, including minimum and maximum age, educational qualification or level and nationality. This is conducted by military administrative support personnel.
- Medical and Physical Assessment: This includes the fact that candidates for recruits and cadets must meet criteria with respect to physical conditions like heights, absence of colour blindness and backbone problems etc. This is conducted by medical doctors, and physical trainers, but psychologist can also help during neuropsychological and psychopathological screening.
- Psychological Assessment: According to Devriendt (2013) psychological selection is broad and involves assessing the candidate's abilities in relation to mental, intellectual, social and motivational criteria. It further assesses the candidate's ability to feel at ease within the organizational climate or military culture. As mentioned earlier, the psychological assessments are conducted using various tools such as psychological tests, interviews, case study, observation specially designed apparatus and measurement procedures etc. The psychological assessment depending on the type may be conducted by trained selection officers, psychologists, military specialists who have experience in certain jobs and high ranking officers who often decide on acceptance or rejection of applicants as members or chairperson of a selection board. Most psychological assessments are achieved using the mixed format (that is uniform and diversified).

Types of Psychological Assessment Tools used in Military Selection.

Among the many psychological assessment technique available for military selections which include observation (participant and non-participant); interview (structured, unstructured and semi-structured); biographical data; case study, the psychological tests are the most popular and reliable, because of its psychometric qualities. Types of psychological tests used in selection of military personnel include, aptitude test, achievement tests, and personality tests.

Aptitude tests: This is the most frequently used psychological testing tools. It is sometimes called cognitive or mental ability or intelligence test. It is usually administered in the uniform format and most psychological aptitude tests used for military selection purposes have time limit by implication, tests performance and speed are equally important. They also contain subtests which give indications about cognitive qualities such as numerical reasoning, verbal reasoning, spatial ability, mechanical comprehension and general reasoning. Scores can be calculated separate per subtest or scores can be grouped in a total score. The performances in aptitude test batteries reflect a general level of cognitive functioning and ability to learn. Generally, for most aptitude test used in military higher scores indicate superior and better level of cognitive functioning and ability to learn. Examples of some standardized military aptitude tests for selection into the military include, Army Alpha test and Beta test and the Armed Services Vocational Aptitude Battery (ASVAB)

Army Alpha Test

This was created by a group of psychologists led by Robert Yerkes, to aid in segregating the mentally incompetent, classifying applicants according to their mental capacity and assisting in selecting competent applicants for responsible positions. The Army Alpha tests measured verbal ability, numerical ability, ability to follow directions and knowledge of information. The Army Alpha test is for literate applicants who can read and write. While Army beta test are for applicants who cannot speak or understand the language of the test and illiterate.

Armed Services Vocational Aptitude Battery (ASVAB)

This is an improvement on Alpha test. It is a cognitive aptitude battery measuring domains such as General Science (GS), Arithmetic Reasoning (AR), Word Knowledge (WK), Paragraph Comprehension (PC) Numerical Operations (NO), Coding Speed (CS), Auto and shop Information (AS), Mathematics Knowledge (MK), Mechanical Comprehension (MC) and Electronics Information (EI). The most important aspect of the test involves summing composites $AR + WK + PC + NO =$ Armed Forces Qualification Test (AFQT).

Achievement tests

These can also be referred to as knowledge tests or skill test. They are traditional measures of cognitive ability and are better suited to get an impression of scholastic knowledge. The most common type of achievement test is a standardized test developed to measure skills and knowledge learned in a given grade level, usually through planned instruction, such as training or classroom instruction. Achievement test scores are often used in an educational system to determine what level of instruction for which a student is prepared. High achievement scores usually indicate a mastery of grade-level material, and the readiness for advanced instruction. Low achievement scores can indicate the need for remediation or repeating a course grade. In the military most achievement test are diversified and are used for placement or promotion or selection for special mission. It is usually based on the supposed experiences on the job and can take different forms at different times.

Personality Tests

The nature and personality structure of a candidate is very useful in view of the candidate's adaptation skills to military training, military jobs and the prospective behavior in operations. The main aim of personality selection is to make statements about the level of a candidate's fit into the military organization culture. It is also used in diagnostic assessment for psychopathology among serving personnel. Most personality tests are standardized and they have high psychometric validity. They also have standardized norms or cutoff scores which are either high, borderline, or low and whether an individual possesses desired or undesired personality depends on the test interpretation. The most common personality tests include Objective and projective tests. Minnesota multiphase Personality Inventory (MMPI) and Sixteen Personality Factor Questionnaire (or 16PF) are examples of objective test, while Rorschach Inkblot Test is an example of projective test.

Minnesota multiphase Personality Inventory (MMPI)

The most common objective personality test is the MMPI is the most common objective personality test; it contains 567 true/false test that is a good measure of dysfunction within personality. It is less useful as a measure of healthy or positive personality traits, because its design was based on helping a professional to find a psychiatric diagnostic label that best suited an individual. It was originally developed in the 1940s, and significantly revised in 1989 (and had another minor revision in 2001). MMPI measures personality traits such as Hypochondriasis (Hs), **Depression (D)**, **Hysteria (Hy)**, **Psychopathic Deviate (Pd)**, **Masculinity/Femininity (Mf)**, **Paranoia (Pa)**, **Psychasthenia (Pt)** **Schizophrenia (Se)** **Hypomania (Ma)**, **Social Introversion (Si)**. It does this by connecting an individual's responses to dozens of questions scattered throughout the test that are positively or negatively correlated with a particular personality trait. Because the questions are not always obviously related to the trait to which they are correlated, it is difficult to "fake" this test. The MMPI is most often self-administered on a computer in a clinician's office.

Sixteen Personality Factor Questionnaire (or 16PF)

This is an ideal measure for people with healthy personalities on like MMPI which is used mainly for assessment of psychopathology. The 16PF measures 16 basic personality traits which contain 185 items and can help a person better understand where their personality falls amongst those traits: Warmth (Reserved vs. Warm; Factor A), Reasoning (Concrete vs. Abstract; Factor B) Emotional Stability (Reactive vs. Emotionally Stable; Factor C), Dominance (Deferential vs. Dominant; Factor E), Liveliness (Serious vs. Lively; Factor F), Rule-Consciousness (Expedient vs. Rule-Conscious; Factor G), Social Boldness (Shy vs. Socially Bold; Factor H), Sensitivity (Utilitarian vs. Sensitive; Factor I), Vigilance (Trusting vs. Vigilant; Factor L), Abstractedness (Grounded vs. Abstracted; Factor M), Privatness (Forthright vs. Private; Factor N), Apprehension (Self-Assured vs. Apprehensive; Factor O), Openness to Change (Traditional vs. Open to Change; Factor Q1), Self-Reliance (Group-Oriented vs. Self-Reliant; Factor Q2), Perfectionism (Tolerates Disorder vs. Perfectionistic; Factor Q3), Tension (Relaxed vs. Tense; Factor Q4). This type of assessment might be administered so that a person can better understand themselves, and it can also help a professional better understand what type of approach or strategy to employ in treatment to best help the person.

Rorschach Inkblot Test

The test is composed 5 black and white inkblot cards and 5 colored inkblot cards that an individual is shown and then asked to tell the professional what they see. The most popular scoring system for the Rorschach is the Exner system, developed in the 1970s. Responses are scored based the location described in the inkblot, and its determinants (that is the things in the blot that prompted the person's response).

Placement, Training and Promotion

As noted earlier, most psychological testing and assessment for the purposes of placement, or training or promotion are diversified form. They depend on whether the officers are in Army, Navy or Air force or the subsections of the units conducting the assessment. Specifically each unit design or adapt a special psychological test to march the needs and skills required for such unit. The common types of tests used for placement, on the job training and promotion are achievement test and personality test. However, other forms of psychological assessments such as interview and observation are also utilized. The tests used for these purpose also target cognitive, mental and intellectual abilities and achievements in relation to the work. Generally, psychological tests such as MMPI, Executive Function test, 16PF,

Thematic Apperception Test and indeed many other cognitive, intelligent, personality and special adapted achievement tests could be utilized.

Conclusion

The nature of military job makes it important that the psychological welfare of the military personnel should be handled with care (starting from the recruitment processes to placement, selection for special mission and promotion). Also the psychological balance of those selected for military leadership should even be handled with more care because of the possible consequences of the decisions such leaders can take in various context or situations. Psychological assessment tools, especially psychological tests have proven to be a significant predictor of future ability or potentials. Therefore in addition to administrative and medical assessment, psychological assessments must be conducted in the process of selection, placement or promotion in the military arena.

In Nigeria, the Defense Headquarters has a special unit that is in-charge of Armed Forces recruitment either for cadet candidates for the Nigeria Defense Academy (NDA) or graduates who did not pass through NDA but wanted to be enlisted in the short service or for recruit officers. In either case, the psychological screening exercise usually involve uniform aptitude test; medical examination of all those who pass the aptitude test; physical observation, and oral interview by a special board who make the final decision on whom to be enlisted or dropped.

Finally, psychological testing and assessments are very useful in military arena not only for selection, placement and promotion purposes, but also for training, diagnosis and identification of officers who need to be demobilized because of mental imbalance or reoccurring trauma that could jeopardize the life of other officers during operation.

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