

**EFFECTS OF PSYCHOLOGICAL TESTING IN THE SELECTION OF
PROFESSIONAL EMPLOYEES IN THE KENYA PRISONS SERVICE
(A CASE STUDY OF PRISON INSTITUTIONS IN MOMBASA COUNTY)**

BY

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DECLARATION

Declaration by Candidate

This Thesis Report is my original work and has not been presented for any research study in any other University or Institution;

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DEDICATION

This work is dedicated to my well cherished family; beloved wife Trizer, lovely children, Pearl Ambala and Trevor Amani; you are precious gifts that God gave me and to my late mother, Ambala, your memories are a great inspiration to me; Rest-In-Peace Mum.

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ABSTRACT

It is widely recognized that many human resource functions have the capacity to dramatically alter the effectiveness of organizations, especially the staffing function has a huge impact on an organization's effectiveness and its ability to develop a sustainable competitive advantage. The success of organizations depends on the calibre of the manpower it has among other factors. One of the strategies to competitiveness is adopting an efficient employee selection process which ensures right employees with right skills are placed on the right jobs. Selection is the process of choosing from numerous applicants, a suitable candidate to fill a vacant position. Properly selected employees are more productive at work than those who are not. Effective selection process is therefore vital for organizational competitiveness. Psychological Testing is a process that uses tests, profiles or a combination of the two to form a deeper understanding of a particular subject such as a candidate's job suitability or outlining a certain trait or characteristic behavior in an individual. Kenya Prisons Service employs two categories of personnel, professional and non-professional officers. The two categories undergo different selection processes during their recruitment with psychological tests only being administered in the selection of professional officers. The employee - job suitability of professional officers always seem to be higher than non-professional officers thus invoking the need to identify the effect that psychological tests, among other factors, may have on the overall success of the employee selection process. The general objective of this study therefore, was to identify the effect of Psychological Testing on the process of employee selection in the Kenya Prisons Service. The specific objectives were; to determine the effect of Aptitude Tests on the effectiveness of employee selection process, to establish the effect of Intelligence Tests on the effectiveness of employee selection and to identify the effect of Personality Tests on the effectiveness of employee selection. This study was anchored on three theories associated with psychological testing namely, The Multiple Intelligence Theory, The Psychometric Theory and The Item Response Theory, all which were important in justifying the relevance of this study and helped to describe the effect of the independent variables on the dependent variable. The study employed an exploratory research design. Data was collected by means of a Structured Self-administered Questionnaire. The target population had 360 members out of which a sample of 108 respondents was obtained being 30% of the target population, a sample size recommended for this research design. The study employed simple random and stratified random sampling techniques. The data collected was analyzed using the SPSS tool of Data Analysis Version 21 which generated descriptive statistics. The mean, the standard deviations and the Pearson Correlation as well as the Multivariate Regression Statistics of responses were presented through statistical tables. The Correlation Coefficient for the three independent variables; Aptitude Tests, Intelligence Tests and Personality Tests were .394, .468 and .481 respectively implying a significant relationship between the independent and dependent variables since they exceeded the Correlation which is significant at the 0.01 level in the (2-tailed) tests. The Regression Model connecting the three Psychological Tests and Selection was significant ($F = 9.406$, $p < .001$) giving conclusive evidence that psychological testing influence the selection process. This study concluded that psychological tests have a significant effect on the process of employee selection. An increase in effectiveness of Psychological Testing strategies and policies will result in an increase in effective selection of employees in Kenya Prisons Service. The study recommends that Kenya Prisons Service should incorporate psychological testing in the selection process of all its categories of employees.

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ACRONYMS AND ABBREVIATIONS

AIDS	Acquired Immunodeficiency Deficiency Syndrome
APA	American Psychological Association
ASVAB	Armed Services Vocational Aptitude Battery
AT	Aptitude Tests
BI	Borstal Institution
CAP	Chapter, (in relation to Law)
CESCA	Commissioners for Eastern, Southern and Central Africa
CO	Correctional Officer
EAC	East African Community
GMAT	Graduate Management Admission Test
GRE	Graduate Record Examination
HIV	Human Immunodeficiency Virus
IQ	Intelligent Quotient
IRT	Item Response Theory
IT	Intelligence Tests
KCSE	Kenya Certificate of Secondary Education
KPS	Kenya Prisons Service
MIT	Multiple Intelligence Theory
MMPI	Minnesota Multiphase Personality Inventory
PI	Personality Tests
PSTC	Prisons Staff Training College
PT	Psychometric Theory
SA	South Africa

OPERATIONAL DEFINITION OF TERMS

Abstract Reasoning: Measures your ability to identify the underlying logic of a pattern and then determine the solution.

Agreeableness (A): This reflects many individuals adjust their behaviour to suit others.

Aptitude Tests: A test or an instrument used to determine and measure an individual's ability to acquire, through future training, some specific set of skill, (Gardner, 2009).

Extroversion (E): The personality trait of seeking fulfilment from sources outside the self or in community.

Conscientiousness (C): The personality trait of being honest and hardworking.

Data Checking: Measure how quickly and accurately errors can be detected in data and are used to select candidates for clerical and data input jobs.

Fault Diagnosis: These tests are used to select technical personnel who need to be able to find and repair faults in electronic and mechanical systems.

Intelligence Tests: A test that is a measure of one's intelligence meaning it is a test designed to measure a person's mental aptitude or inherent ability, Gilman & Lynn, (2012).

Mechanical Reasoning: Designed to assess your knowledge of physical and mechanical principles, mechanical reasoning questions are used to select for a wide range of jobs including the military - Armed Services Vocational Aptitude Battery, (ASVAB), police forces, fire services, as well as many craft, technical and engineering occupations, Chris Dewberry, (2011).

Multiple Intelligence Theory: A Theory propounded by Gardner that proposes the notion that human beings have not just one type of intelligence, but several, (Doorey, (2001).

Neuroticism (N): The personality trait of being emotional.

Numeric Ability: These types of tests include basic arithmetic, number sequences and simple mathematics.

Openness to Experience (O): The personality trait of seeking new experience and intellectual pursuits.

Personality Tests: This is a test that assesses one's personality and behavioural style through a self-report personality questionnaire, as they relate to the job and workplace environment, (Sternberg, 2004).

Psychological Testing: An assessment procedure designed to provide objective measures of one or more psychological characteristics, (Sternberg, (2004).

Psychometric Theory: A Theory used in the development of mental tests and analysis of data collected from these tests, (Embretson & Reise 2000).

Psychometrics: A field of study concerned with the theory and technique of psychological measurement, which includes the measurement of knowledge, abilities, attitudes, and personality traits, (Rasch, 1960).

Reliability: Reliability is the degree to which an assessment tool produces stable and consistent results. A measure of the degree to which a research instrument yields consistent results or data after repeated trials, (Cozby, (2001).

Spatial Ability: Measures your ability to manipulate shapes in two dimensions or to visualize three-dimensional objects presented as two-dimensional pictures.

Validity: refers to how well a test measures what it is purported to measure. Validity is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study, (Cozby, (2001).

Verbal Ability: Includes spelling, grammar i.e. the ability to understand analogies and follow detailed written instructions.

Work Sample: Involves a sample of the work that you will be expected to do. They may involve exercises using a word processor or spreadsheet if the job is administrative or they may include giving a presentation or in-tray exercises if the job is management or supervisory level.

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter has presented the background information of the study, background information on Prisons in Mombasa County, statement of the problem, research objectives and the hypotheses. It has also offered the scope, limitations and significances of the study, which is about, “Effects of Psychological Testing in the Selection of Professional Employees in the Kenya Prisons Service adopting a case of Prison Institutions in Mombasa County”. .

1.1 Background Information

It is widely recognized that many human resource functions have the capacity to dramatically alter the effectiveness of organizations, especially the staffing function which has a huge impact on an organization’s effectiveness and its ability to develop a sustainable competitive advantage. One strategy to make competitive organizations is having the right employees with right skills placed on the right jobs, Pfeffer, (2015). The highly competitive and changing organizational environment requires that managers realize appreciate the fact that the success of an organization largely depend on the efficiency and effectiveness of the selection process of its Human Resources. The success of organizations depends on the calibre of the manpower it has among other factors, Armstrong & Taylor, (2015).

Armstrong & Taylor, (2015), defines employee selection as a process in which applicants are picked through thorough screening by comparing the information available about them with the key criteria in the person’s specification. The criteria should be analyzed with care so that they are fully understood. These criteria can be

classified under the following three headings so that they can be applied consistently to guide sifting decisions: 1 Essential – where applicants will not be considered unless this criterion is satisfied, 2 Desirable – where applicants who meet this criterion will be given favourable consideration but it is not an essential requirement, 3 Very Desirable – where preference will be given to applicants who meet this criterion.

If a number of applicants meet the first two criteria, satisfying desirable criteria would be a factor in making a choice. A highly structured method of examining applications is provided by the use of bio-data, Armstrong & Taylor, (2015). These are items of biographical data that are criterion-based (i.e. they relate to established criteria in such terms as qualifications and experience that indicate whether individuals are likely to be suitable). These are objectively scored and, by measurements of past achievements, have the ability to predict future behaviour.

Employee Selection is the process of interviewing and evaluating candidates for a specific job and selecting an individual for employment based on certain criteria, Miller, (2012). Employee selection can range from very simple to very complicated processes depending on the firm hiring and the position. Compliance with certain employment laws such as anti-discrimination laws is also vital during employee selection, (Armstrong & Taylor, 2015).

Gobbler, (2015), points out that selecting the best candidates for the vacant positions within an organization is a challenging venture since establishing your selection criterion basing on academic qualification alone may not offer sufficient threshold in making rational decisions when hiring which can assure it of a workforce that is able to meet the institutions goals. Providing high quality processes and systems to select people who wish to train and work in an organization is clearly very important. Job

Contents and Personality impacts employee performance through three main strategies namely; i) Person–Job, (P–J) Fit, ii) Person-Organization, (P-O) Fit and iii) Person–Work Environment, (P–WE) Fit, (Miller, 2012).

The Person–Job Fit (P–J) Fit, refers to the compatibility between a person’s characteristics and those of a specific job. This includes the traditional view of selection that emphasizes the matching of employee’s Knowledge, Skills, and Abilities (KSAs) and other qualities that the job demands. The discrepancy models of job satisfaction and stress that focus on employees’ needs and desires being met by the supplies provided by their job. The Person-Organization Fit (P-O) Fit Theory postulates that a person's personality traits will reveal insight to adaptability within an organization. The degree of confluence between a person and the organization is expressed as their Person-Organization (P-O) fit. Common measure of the P-O fit is workplace efficacy; the rate at which workers are able to complete tasks within stipulated time and in the right manner, Miller, (2012).

Employees are more likely to stay committed to organizations if the fit is 'good'. In practice, P-O Fit would be used to gauge integration with favourable organizational competencies. The Individual is assessed on these competencies, which reveals efficacy, motivation, influence, and co-worker respect. Competencies can be assessed using various tools like Psychological Tests, Assessment Centres Competency Based Interviews, Situational Analysis, etc, (Miller, 2012).

The Person–Work Environment, (P–WE) Fit is defined as the degree to which individual and environmental characteristics match, Miller, (2012). A person’s characteristics may include an individual’s biological or psychological needs, values, goals, abilities, or personality, while environmental characteristics could include

intrinsic and extrinsic rewards, demands of a job or role, cultural values, or characteristics of other individuals and collectives in the person's social environment. Due to its important implications in the workplace, Person–Environment Fit has maintained a prominent position in Industrial and Organizational Psychology and related fields.

The three strategies, Person–Job Fit (P–J) Fit, Person-Organization Fit (P-O) Fit and Person–Work Environment Fit (P–WE) Fit, are so instrumental in ensuring adequate management of human resources in the organization since they have a higher effect on keeping employee turnovers abase, they help in proper placement and deployment of employees, they are key in appraising potential employees for promotion, help an organization acquire a workforce that can easily cope with and work under stressful situations among other many benefits, (Miller, 2012).

To achieve competitive advantage through people, organizations must therefore be able to select individuals who have exceptional skills and whose talents, values, and motives best fit the organization’s culture, structure, and reward systems, Gobbler, (2015). One way of achieving this is through incorporating Psychological Testing during employment interviews.

Psychological Testing is a process that uses tests, profiles or a combination of the two to form a deeper understanding of a particular subject such as a candidate’s job suitability or outlining a certain trait or characteristic behavior in an individual, Natasha, (2015). The British Psychological Society, (2014) defines Psychological Testing as an assessment procedure designed to provide objective measures of one or more psychological characteristics i.e. the characteristics within individuals that determine their various abilities. According to Natasha, (2015), ‘Psychometric Testing’

or simply 'Psychometric Assessment' refers to the use of tests, profiles or a combination of the two to form a deeper understanding of a particular subject such as a candidate's job suitability or outlining a certain trait or characteristic behaviour in an individual.

Take for example a customer services representative who will need to resolve customer complaints; they will need numerical reasoning skills, interpersonal skills, and the ability to think quickly, accurately and make informed decisions. Well-designed Psychometric Assessments would be able to consider an individual's compatibility with these requirements by considering all these areas, as well as 'weighting' them as appropriate. This will then form a basis of forming a concise decision in picking the right candidate from several applicants for such a job. A psychological test is a systematic procedure for obtaining samples of behaviour, relevant to cognitive or affective functioning, and for scoring and evaluating those samples according to standards.

Psychological Testing is generally used to discover how good someone is at a particular skill, such as verbal or numerical reasoning, Natasha, (2015). This is different to the related area of psychometric profiling which is used to "build a picture" of either an individual or a team, such as identifying their values, personality type or occupational interests. The important feature of psychological tests is that they produce measures obtained under standardized assessment conditions which have known reliability and validity i.e. they provide a reliable and appropriate way of comparing a person's performance against that of others in a particular area of practice. They determine how good someone is at something. Psychological Tests are used in many walks of life to assess ability, personality and behaviour, for example, as part of the selection process

for job interviews, or to assess children in schools or offenders in prisons, (Anastasi & Urbina, 1997).

Mellenbergh, (2014), stated that a psychological test is an instrument designed to measure unobserved constructs, also known as latent variables. This means these tests are used to reveal the potential that is hidden within individuals. Psychological tests are typically, but not necessarily, a series of tasks or problems that the respondent has to solve. They can strongly resemble questionnaires, which are also designed to measure unobserved constructs, but differ in that psychological tests ask for a respondent's maximum and overall performance whereas a questionnaire asks for the respondent's typical performance.

1.1.1 Background Information on Prisons in Mombasa County

Kenya Prisons Service is one of Agencies in the State Department for Correctional Services under the Ministry of Interior and Co-ordination of National Government, one of the Ministries in the Office of the President. The organization derives its mandate from the Prisons Act Chapter 90 (CAP 90) Laws of Kenya and the Borstal Institutions Act Chapter 92 (CAP 92) Laws of Kenya among others, which empowers the service to perform its functions, (Ombima, & Were, 2014). A report by the Public Relations and Communications Department at the Kenya Prisons Regional Administrative Office – Coast Region, in 2011 during the centenary celebrations, since the inception of the Prisons Service in Africa gives an overview of the establishment and role of the Kenya Prisons Service.

The Prison facilities in Mombasa County, are among the 132 Penal Institutions spread across the country, which form Kenya Prisons Service. It is a disciplined formation hence a categorized together with the Defence Forces of Kenya, The National Police

Service, The Kenya Wildlife Service, The Kenya Forest Service and the National Youth Service. Mombasa County has got five Penal Institutions and also it hosts the Regional Prisons Head Office for Coast Region. The Penal Institutions are Mombasa Remands and Allocation, Shimo La Tewa Main (Maximum Security Prison), Shimo La Tewa Medium, (Medium Security Prison), Shimo La Tewa Women, (the Women Wing), Shimo La Tewa Bortal Institution, the Juvenile Wing) and the Regional Prisons Head Office.

The first institution to be established in Mombasa County was Shimo La Tewa Main which was established in early 1940s and was opened in 1952. It served as an overflow of Fort Jesus, which had been set up by the Portuguese Army to detain war captives and other groups of people who stood their way while on their exploration mission to the East African Coast. Shimo Women, Shimo Medium and Shimo Borstal Institution were opened later. These four institutions form what is commonly known as the Shimo Command. Shimo Command is located 520 km, approximately 390 miles South East of Nairobi, the capital city of Kenya. It is further located about 17.8km North of Mombasa city off the Mombasa - Malindi Road immediately after Shanzu Teachers Training College and before the famous Mtwapa Bridge. The facilities are situated on a land extending to the beach on one side and bordering the Karisa Maitha Road on the other side. Shimo command has about 1200 employees working in the four Prison categories i.e. Shimo La Tewa Main, Shimo La Tewa Medium Prison, Shimo La Tewa Women, Shimo La Tewa Bortal Institution and the Regional Prisons Head Office. Mombasa Remands and Allocation is located about 3 km from the CBD of Mombasa City. It is mainly a remands facility i.e. it holds remand prisoners.

The facility had a staff strength 212 employees as at December, 2015. Shimo Main is a Maximum Security Prison which holds long sentence and capital offenders. Shimo Medium holds offenders with short term sentences. It is categorized as a Medium Security Prison Institution according to the classification of prisons institutions in Kenya. The Women Prison holds all types of female prisoners. The Borstal Institution is a Penal Institution that holds young offenders (Juveniles) of apparent age of more than 15 years but less than 18 years.

The core functions of the Prison Institutions are; (i) Containment and keeping in safe custody of prisoners, (ii) Rehabilitation/ reformation of prisoners through training and counselling, (iii) Facilitation of administration of justice through the production of prisoners to courts (iv) Control and training of young offenders in Borstal Institutions, (v) Recruiting, training and developing suitable personnel for the service.(vi) Providing accommodation for children below the age of 4 years accompanying their mothers to prisons. (vii) Providing basic human needs to prisoners. (viii) Providing a conducive working environment for prisons' personnel. (ix) Promoting awareness amongst and providing useful information to both staff and prisoners on social welfare issues such as HIV/ AIDS. (x) Conducting research and monitoring crime trends in the Republic.

Studies in the domain of HRM have shown that organizations that have adopted best practices in employee selection have increased organizational profitability and higher productivity, Huselid, (2015). Psychological Testing is generally regarded as an integral part of the best practices in employee selection, Conway et al, (2003). The use of psychological tests for selection purposes has also been increasingly in use in recent years, McDonnell, (2012). This study has appreciated a number of case studies in the area selection of personnel to serve as prisons officers as follows;

1.1.2 Selection of Correctional Officers in the United States of America.

Selection and screening processes which are guided by the governing statutes and regulations. Josi & Sechrest, (2008), agree with Henderson & Rauch, (1997), in that “baseline set of criteria” for huge numbers of categories is offered as a guideline for state personnel regulations. The agency is then, from this guideline, given the opportunity to describe and develop on particular institution occupations. These rudimentary standards are there for the improvement of a useful, proficient and reasonable selection process.

According to Henderson & Rauch, (2007), a sensible recruitment program, begins with a structure of a hiring criteria. This will be done in accordance with the applicable civil service regulations. The principles for staff should include: a) Minimum education level- candidates should have received a General Equivalency Diploma or be High School Graduates b) A minimum level of job experience candidates should have attained experience in the world of work; the institution job should not be an individual’s first experience. c) Personal and financial responsibility- candidates should not display any weakness on demands put forth by inmates. d) Maturity- candidates must prove that they can work independently, carrying out good judgment and demonstrate understanding of human behaviour.

These qualities must be confirmed during the preliminary employment process. The confirmation of these qualities can be done through the utilization of interviews and any other method available. Some agencies utilize the integrity interviewing procedure which assists them in detecting staff who may be predisposed to integrity problems. Other agencies request for, as part of their physical examination, urine samples from candidates to be tested for illegal drugs. A lot of agencies however, require that

candidates be investigated by the law enforcement before they can be hired, Henderson, Rauch, & Phillips, (2009). Psychological Tests are applied on a wider scale and the quality of employees selected is desirable for the specific work.

1.1.3 Selection of Correctional Officers in the UK (Scotland)

The selection process for correctional officers is mainly the screening of applicants to establish who the prison intends to hire. A proper screening process assesses the applicant in such a way that it foretells whether the applicant's abilities will be sustainable and be at the required level and appropriate for the complexity of the job. Suitable and compelling tests that determine the definite job needs are the basis for an unbiased screening process. The selection criteria is as follows:

Written Exams: The first general step is the administration of a wide-ranging written exam. Tests that are written must meet the professional and legal requirements of validity (job-relatedness), utility (usefulness) and minimum adverse impact (fairness). Mays & Winfree (2012), affirms that the written tests are wide-ranging aptitude tests mainly essential for determining the reading ability of the candidate. Correctional officers are expected throughout their careers to re-examine and reply to written commands, so it is important that they display the ability to read and comprehend. A number of agencies could do with psychological examinations and polygraph or voice stress examinations as accompanying investigative tools, (Josi & Sechrest, 1998).

Polygraph Exams: Polygraph examinations entail certifying of the applicant's employment fitness. Criminal justice positions require thorough background checks, and the extent of some enquiry will include having lengthy investigations in to the applicant's family life, financial status, and work record, Mays & Winfree, (2012). Before the final offer of employment is granted, work-related qualifications such as

“general health, physical fitness and agility, emotional stability and psychological fitness” are considered and translated by trained persons, by means of procedures that are valid, useful, and non-discriminatory, Josi & Sechrest (1998). Other forms of tests that are conducted during correctional personnel selection include the following; Cognitive Ability Tests, Job Knowledge Test, Personality Tests, Biographical Data, Integrity Tests, Structured Interviews, Physical Fitness Tests, Work Samples, Assessment Centres and Physical Ability Tests.

Professional correctional personnel that are highly skilled, motivated and knowledgeable are crucial to accomplish the function of corrections. Advanced recruitment and selection criterion of entry level correctional officers can contribute positively to the general performance and function of the organization. Individuals with college degrees oppose the idea that they must start their careers as correctional officers. However, it has been observed that levels of education have improved in modern correctional facilities, Mays & Winfree, (2012). Besides, correctional officer’s educational requirements normally give reason for many college students not to pursue corrections as a career of choice and this therefore cause students to feel over qualified for the job.

This places much emphasis on thorough use of adequate selection tests to ensure that candidates possess the necessary job suitability degree to enable them fit well the job of a correctional officers. This is well achieved through extensive use of psychometric tests and exams which allows getting right candidates. A battery of these tests are applicable to various categories of cadres including Psychologists, Educationists, Social Workers etc., The tests may vary from Numerical Reasoning Tests, Verbal

Reasoning Tests, To Logical Reasoning Tests, etc. Incorporation of Psychological Tests in the employee selection process guarantees a competent workforce all the time.

1.1.4 Selection of Prisons Officers in Nigeria

Psychological Testing is widely used in the army and other paramilitary units in Nigeria including the police and prisons. Nigerian citizens who are interested in joining the prisons can join as trades' men/women or non-trades men/women recruit or as a cadet officers. These selection procedures among other processes involve some types of psychological testing and assessment, CAP P29 of the Laws of the Federation of Nigeria, (2004).

The utility of psychological testing and assessment in the prisons is a "continuum". It starts during selection for recruitment into the prisons and spans till retirement from the active service in the Prisons. In between these periods, psychological testing and assessment are utilized in promotion, placement, special prisons duties, diagnosis and treatment for officers with psychopathology. However, testing and assessment are commonly applied in prisons selection, training and placement more than any other area. Most prisons selection is large scaled and are influenced by societal situation such as special mission, peace or conflict periods.

The main purposes of utilizing psychological testing and assessment in the prisons include the following; a) To classify prospective applicants according to their mental ability so that further placement could be easy. b) To provide the personnel officers with mental rating for each officer which will help in building and organization of the prisons arena. c) To assist Officers-In-Charge of prisons human resource development with classification, grading, training, and ultimate assignment of officers. d) To assist in discovering officers of superior mental ability who should be selected for officers'

training camps, for promotion, or for assignment to special tasks. e) To assist in discovering officers of superior mental ability who should be selected for officers' training camps, for promotion, or for assignment to special tasks.

However, Prisons selection takes different format and processes. Among the many psychological assessment technique available for prisons 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 prisons personnel include, aptitude test, achievement tests, and personality tests, CAP P29 of the Laws of the Federation of Nigeria, (2004). Examples of some standardized Prisons aptitude tests for selection into the Prisons include Army Alpha test and Beta test and the Armed Services Vocational Aptitude Battery (ASVAB). 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, Nigerian Correctional Services Act, (2017).

1.1.5 Selection of Correctional Officers in South Africa

The Department of Correctional Services in South Africa plays five vital roles of administration, incarceration, rehabilitation, care and social integration. Based on the candidate's application, if in the opinion of the department they are a good match for one of roles, they get invited to undertake an assessment process, including psychological testing. Following this they also undergo a criminal record check, medical assessment and attend an interview. This process can take up to 8 to 10 weeks, depending on operational requirements. There are three main stages to selection:

Stage 1: Screening and Testing: Testing is conducted when sufficient applications have been received and involves: Application based screening process, SA Police Offender History check, Literacy, numeracy, and independent IQ testing and Independent psychological assessment to identify your suitability for the role.

Stage 2: Medical and Physical Assessment: The next stage involves candidates undergoing medical and physical checks to ensure they are fit for some of the more active aspects of the role.

Stage 3: Selection Panel Assessment: Successful candidates then undergo the various checks: Panel selection interview, Work reference checks, Final panel review, decision and approvals. Success and the offer of a position with the Department of Correctional Services at this stage will depend on you demonstrating that the candidate has the best potential to meet the job and person requirements.

As part of the selection procedure, selected applicants are required to participate in a series of aptitude tests and suitability profiling instruments. These tests are designed to assess each applicant's suitability to undertake both the academic content of the academy curriculum as well as to deal with the subsequent demands of the job. This process is one of the many important steps we take to ensure that those who are most suitable to this role are selected.

1.1.6 Selection of Prisons Officers in Kenya

The recruitment process for Prison Officers into the Kenya Prisons Service is a process that consists of five main assessments for professional cadres; (i) Academic and Professional Assessment, (ii) Physical Fitness Assessment (iii) Competency Based Interview (for professional positions) (iv) Medical Assessment. (v) Psychological Tests only for professional officers.

Academic and Professional Assessment: This assessment focus mainly on the suitability of candidates in relation to the minimum academic qualifications they need to possess in order for them to be admitted into the service. Usually for service men and women a minimum of KCSE D+ grade is required. For Cadet Officers a minimum of a University Degree in relevant fields is required while for professional cadres, minimum academic and professional qualifications is determined by the position applied for.

Physical Fitness Assessment: This involves candidates being placed on physical exercises and test which include running and body exercises just to ascertain the candidates' physical fitness to take up the training that has a lot to do with physical fitness.

Competency Based Interview: This is mainly applicable for those candidates joining the service as professional officers. Some of the fields include Medical officers, Clinical Officers, Architects, Social Workers, Educationists, Legal Officers, Information Technologists, Computer Scientists, and Agriculturalists. Some of the Tests administered include Aptitude Tests, Intelligence Tests, Personality Tests, Interests, Achievement Tests, Panel interviews etc.

Medical Assessment: The next stage involves candidates undergoing medical checks to ensure they are fit for some of the more active and strenuous aspects of the role. Compared with some of the above countries which well-established Prisons entities, Kenya's scenario is weak in the area of competent personnel. An adoption of elaborate psychological testing during the employee selection process may improve the situation as it is. Thus this study is seeking to establish any relationship which may influence and enhance the Prisons workforce capacity through selecting right employees.

Aptitude and Ability Tests: Aptitude and Ability Tests are administered to candidates being employed as professional Officers.

1.2 Statement of the Problem

Employee Selection is a process of choosing from numerous applicants, a suitable candidate to fill a vacant position, Onyeaghala et al, (2016). Selection is one of the major functions of human resource management which is very important step towards creating the competitive strength and the strategic advantage for any given organization, Grobler, (2015). Ensuring proper selection process is vital for organizational competitiveness.

Failure to approach this function effectively may result to acquisition of wrong and underperforming employees which will in turn lead to low levels of productivity. The success of organizations depends on the calibre of the manpower it has. When the right person is selected, the productivity of the selected person tends to be high or meet the standard set by the organization and vice versa, Pita, 2016)

Cooper (2002) has argued that psychometric tests play a role in psychology, since theories of personality can be tested if individual differences can be measured precisely. Most modern models of individual difference are based on a psychometric method called “factor analysis,” as discussed later in this chapter. Many psychometric tests are used in applied psychology, in educational, occupational and clinical settings among others.

In education, psychologists may use such tests to assess students’ achievements, to identify learning difficulties, to predict future performances of pupils and teachers, and so on (Abbas, 1996; Hambleton and Oakland, 2004). These tests can be used in clinical settings for prognosis and to assess treatment needs and progress (Malim and

Birch, 1998). Psychological Tests can also be used in organisations for personnel selection by making hypotheses about the ways people act and function, and to predict how they will behave in the future, Farag, et al. (2007). Thus, Psychological Testing may contribute to industrial/occupational psychology by providing organisations with data useful for employee selection and promotion, and for the determination and evaluation of training programs, (Essawi, 2013; Gatewood and Field, 2011; Hambleton and Oakland, 2014).

Winfrey et al, (2002), conducted a study to establish the linkage between Psychological Testing and effectiveness of employees recruited into the Police and Correctional Services in Scotland. Stevens L. Thomas, et al, (2009), documented a study on Psychological Testing in Personnel Selection focusing on Contemporary issues in Cognitive Ability and Personality Testing in Selection of Correctional officers in South Africa. Capelli, (2019), conducted a study that presented the challenges, controversies and future directions on Personality Testing in employee selection.

Kenya Prisons Service employs two categories of personnel, professional and non-professional officers. Professional Officers perform specialized duties Non-professional officers perform general duties or functions that do not require specialized skills. Professional personnel include the Sociologists, Counselors, Clinical Psychologists, Educationists, Spiritual Workers, Nurses, Public Health Officers, Legal Practitioners, Industrial Development Officers, Agriculturalists, and Animal Production Specialists, Veterinary Doctors among others. Psychological Testing is only used during the selection of professional officers. Non-professional officers are those who perform general and routine duties or functions that do not require expert skills

like gatekeeping, general surveillance, escort duties, manning of watchtowers among others.

Despite the difference in the scope of their roles and skills, the employee-job suitability of professional officers always seem to be higher than non-professional officers. This has always invoked the need to identify the cause of the parity, though much has been linked to the use of psychological Testing in the selection of professional officers among other factors. Based on the above studies involving psychological testing by various scholars and in different settings, and in line with the Multiple Intelligences Theory (MI) which offers an explanation and understanding of human intelligence, stating that human beings have several types of intelligences. This study therefore, sought to identify the effect of Psychological Testing on the process of employee selection in the Kenya Prisons Service.

1.3 Research Objectives

The objectives of this study comprised of both general and specific objectives presented as follows;

1.3.1 General Objective

To identify the effect of Psychological Tests in the selection of Professional Employees in Kenya Prisons Service.

1.3.2 Specific Objectives

This research aimed at achieving the following specific research objectives;

- a) To determine the effect of Aptitude Tests on the effectiveness of employee selection in Kenya Prisons Service.

- b) To find out the effect of Intelligence Tests on the effectiveness of employee selection in Kenya Prisons Service.
- c) To identify the effect of Personality Tests on the effectiveness of employee selection in Kenya Prisons Service.

1.4 Research Hypotheses

This study adopted three null hypotheses as follows;

H₀₁: There is no significant relationship between Aptitude Test and the Employee Selection Process in Kenya Prisons Service.

H₀₂: There no significant relationship between Intelligence Test and the Employee Selection Process in Kenya Prisons Service.

H₀₃: There is no significant relationship between Personality Test and the Employee Selection Process in Kenya Prisons Service.

1.5 Scope and Limitations of the Study

This study was carried out within Six Prisons Institutions situated in Mombasa County. The Penal Institutions are Mombasa Remands and Allocation, Shimo La Tewa Main, Shimo La Tewa Medium Prison, Shimo La Tewa Women, Shimo La Tewa Borstal Institution and the Regional Prisons Commander's Office. The study targeted the professional employees whose population in the County was 360 officers performing administrative and specialized duties. A Sample size of 108 members was used which formed the units of analysis for the study. These professional personnel included Sociologists, Counsellors, Psychologists, Educationists, Spiritual Workers, Nurses, Public Health Workers, Legal Practitioners, Industrial Development Officers,

Agriculturalists, and Veterinary Doctors among others. The study was conducted within a period of 4 months for the period covering August to December, 2017.

Several limitations and constraints were encountered by the researcher during study.

Some of these limitations included;

a) Lack of Access to sufficient literature in this area of study: Very few researchers have conducted studies in the area of Psychological Testing hence this poses a challenge in accessing adequate literature to enable the identify gaps between the existing literature and the study itself. This especially within the African region where this particular study was conducted. The researcher realized that there was very little prior research in the area of the effects of Psychological Testing on employee Selection.

In order to overcome this limitation, the researcher adopted an exploratory research design so that the study would serve as baseline research in this area in addition to the fewer previous studies existing. The researcher also presented a letter of introduction from the Moi University, a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) and further letters of introduction and authorization from the County Commissioner's office and the office of the County Director of Education, to justify that the study had been formally permitted.

b) Difficulties in the process of data collection; This study, by virtue that it was conducted within Prison Institutions which are security Installments, posed challenges to the process of data access and collection. First accessing these institutions themselves was not easy at all because of the many procedures involved. Second getting the desired data from the units of analysis was equally difficult as most of them needed the approval of the management to participate in the researcher and even after these approval, some were still skeptical whether to respond to all questions from the researcher, as such they

tended to withhold back most of the information, especially any information that seemed sensitive on their part. This limitation made the researcher to opt for a case study and also reduced the scope of the study to only six prison institutions in Mombasa County instead of having to carry the study in Prison Institutions in other parts of the Countries, as this would be even more tedious to collect data. The researcher also assured that this researcher was solely meant for academic purposes and that the information collected would not be used for any other purpose other than the academic purposes.

c) Use of standard questionnaires as data collection instruments had some challenges: This research used Structured Questionnaires which were dropped and later picked by the researcher. This had the limitation of clarifications to the questions when and where some respondents needed to be guided further before fully responding to some questions. This meant that some questions were either left unanswered or were incorrectly responded to. The researcher while dropping the questionnaires had asked the potential respondents to avail their contacts which were used by the researcher to make follow-ups through phone calls to find out whether there were some areas that needed clarifications. The researcher also made phone calls to respondents during the editing process to seek more clarifications on their responses that were not clear.

d) Challenges in the process of Data Analysis: The researcher used SPSS Tool of Data Analysis Version 21. This produced some Statistics that were not easy to interpret e.g. Regressions Coefficients, ANOVA, and Correlation Coefficients among others. The researcher sought the guidance of the supervisors who guided him in interpreting the statistics in relation to variables used in the study. The researcher also made references to books and documented literature on the applications of the SPSS Tools of analysis.

1.6 Significance of the Study

This study once successfully conducted would have the following significances;

To Kenya Prisons Service: The study will help KPS to review its current employee selection strategies, adopt and incorporate Psychological Testing into its recruiting and selection strategy to ensure suitability of selected employees.

To Moi University: The study will be resourceful to Moi University as an institution of higher learning since it will provide a source of literature review for future studies and help students who may need to conduct studies in the same area.

To other Researchers and Academicians: It will be resourceful to future researchers and academicians who may want to further studies on Psychological Testing. They may also find this study useful serving as a good source of research problem.

To the Researcher: This study will enable the researcher to get certification and recognition after successful completion of the course. Being an academic research, the study will be relevant to completion of the academic program under pursuit.

The Government and other stakeholders: The study will be resourceful to the government when it comes to making sound decisions concerning employee recruitment, selection and in creating a resourcing strategy that will be able to bring on board human capital that can be counted on in achieving its goals.

1.7 Chapter Summary

This chapter has covered in details the background information of the study, the background information on Prisons in Mombasa County, the Statement of the problem and the research objectives where three main objectives have been highlighted. The variables presented in the research which are Aptitude, Ability and Intelligence tests as

aspects of psychological testing. The study has also highlighted the research hypotheses, the scope of study and limitations of the study and the significance of study. Cases studies looked into include the United States of America, United Kingdom, particularly Australia, (Fullham Correctional Center), Nigeria, South Africa and Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter has discussed the various literature reviewed in relation to this study. It has elaborately looked at the Theoretical and Empirical Literatures, review of variables, critiques of the existing literature, research gaps and the Conceptual Framework.

2.1 The Concept of Employee Selection

Employee Selection is the process of putting right men on right job. It is a procedure of matching organizational requirements with the skills and qualifications of people. Effective selection can be done only when there is effective matching, Armstrong, (2014). By selecting best candidate for the required job, the organization will get quality performance of employees. Moreover, an organization will face less of absenteeism and employee turnover problems and also save time and money. Proper screening of candidates takes place during selection procedure. All the potential candidates who apply for the given job are tested. However, selection must be differentiated from recruitment, though these two are closely related phases of employment process.

Recruitment is considered to be a positive process as it motivates more of candidates to apply for the job. It creates a pool of applicants. It is just sourcing of data. While selection is a negative process as the inappropriate candidates are rejected here. Recruitment precedes selection in staffing process and works towards creating a pool of applicants from which suitable candidates can be selected. Selection involves choosing the best candidate with best abilities, skills and knowledge for the required job.

According to Odiorne, (1984), one result of effective recruitment and selection is reduced labour turnover and good employee morale. Recruiting ineffectively is costly, since poor recruits may perform badly and leave their employment, thus requiring further recruitment.

Personnel selection practices have become more widely used over the years, particularly with law enforcement candidates. This increased use has included more sophisticated methods of evaluating potential candidates to serve as military personnel, police officers, fire fighters, prisons and correctional officers. An overview of recruitment and selection procedures in some countries give an insight into the nature of employee recruitment and selection. According to Armstrong, (2014), selection criteria are used to determine the best-qualified applicant from among all the candidates who have met the minimum qualifications for the particular position.

Selection criteria go beyond minimum qualifications and look at quality and quantity of education, experience, knowledge and other skills that each applicant possesses. Selection criteria also include qualifications that may be unique to the particular job and the particular department rather than the more general minimum qualifications that are used for the university as a whole. When applicants are compared to each other and selection criteria are applied, the best-qualified candidate can be selected for a particular job.

Armstrong & Taylor, (2014), has suggested different types of selection tests which include among others intelligence, personality, ability, aptitude, interest and attainment tests. The difficulty of Intelligence test is that it has to be based on theory of what constitutes intelligence and then have to derive a series of verbal and non-verbal instrument for measuring different factors. As for the personality tests, Armstrong

argues that they are tests that are used to assess the personality of candidates in order to make prediction about their likely behaviour in role. Ability tests on the other hand, deals with measuring job characteristics such as number, perceptual or mechanical ability, Armstrong & Taylor, (2014). Attainment tests focuses on measuring the abilities and competences that have been acquired through training, experience and learning. Aptitude tests are job specific tests that are designed to predict the potential an individual has to perform tasks within a job and they cover areas such as clerical, aptitude, numerical and mechanical aptitude. Intelligence tests are used to measure intelligence or one's ability to understand the environment, enabling him/her to interact with and learn from it.

2.1.1 The Concept of Psychological Testing and Employee Selection

A psychological test is a systematic procedure for obtaining samples of behaviour, relevant to cognitive or affective functioning, and for scoring and evaluating those samples according to standards, Urbina, (2004). According to Carl Hose, (2013), hiring and training new employees can be a complicated as well as a costly process. To help keep turnover to a minimum, some companies strategically choose to employ psychological tests and testing to ensure that potential employees are and desirable suitable before hiring them. As a result of these focuses, psychometric research involves two major tasks: (i) The construction of instruments and the development of procedures for measurement. (ii) The administration of these tests to select the right employees.

There are a number of different psychometric tests available that are designed to produce a behavioural profile for the position one is applying. Psychometric tests can measure an individual's analytical skills, intelligence, personality traits, behaviour style

and other characteristics relevant for the job you are applying for. The type of psychometric test used for a selection process always depends on the job requirements.

2.1.2 The Concept of Aptitude Testing and the Process of Employee Selection

An Aptitude Test is an instrument used to determine and measure an individual's ability to acquire, through future training, some specific set of skills. The definition of aptitude is an innate, learned or acquired ability. It is part of the psychometric tests at the assessment centre (the other part being personality tests, personal abilities, attitude and more others), Hamera and Brown (2000). Chris Dewberry, (2011) has defined "aptitude" to refer to the extent to which an individual has the psychological and behavioural characteristics (ability) necessary to perform at a high level in a particular environment (including task, job, training or educational programme) in the long term. Aptitude tests are mainly made to assess specific skills and knowledge. The purpose of the aptitude test is to test work related perceptions, judgment and reasoning.

There is no widely accepted definition of the difference between ability and aptitude. Most people would agree that to some extent the two terms refer to the same thing: aptitude referring to specific capacity, and ability referring to general capacity. We could probably view ability as underlying aptitude, and aptitude as being more job related than ability. For instance a computer programmer might score highly on a verbal ability test and highly on a programmer aptitude test but not the other way around. Aptitude Test measures a person's potential, for instance to learn the skills needed for a new job or to cope with the demands of a training course, (Dewberry, 2011).

Aptitude tests are structured systematic ways of evaluating how people perform on tasks or react to different situations. They have standardized methods of administration and scoring with the results quantified and compared with how others have done at the

same tests. Cognitive aptitude, sometimes called general intelligence, is the single most accurate predictor of job performance, Dewberry, (2011). This is because employment aptitude tests assess qualities that are critical to almost all mid and higher-level jobs. These capabilities include: problem-solving, critical thinking, attention to detail and the ability to learn, digest, and apply new information.

The concept of aptitudes and the procedure of aptitude testing are based on critical assumptions about the structure of human ability. From the outset, the structure of human intellectual ability has been one of the most researched topics in the science of psychometrics, Dewberry, (2011). The fundamental question here is whether there is a general construct of cognitive ability, with some people more able than others in a wide range of intellectually demanding areas, or, conversely, whether people differ with respect to specific and relatively independent types of cognitive ability (e.g. verbal and numerical).

Criteria's employment aptitude tests provide a rapid and precise way of measuring the abilities required to succeed in nearly every occupation. Administering tests to the candidates helps in the making of better talent decisions. Susanne Jaeggi et al. (2008), candidates who score well on employment aptitude tests are more likely to successfully complete training, better equipped to adapt and evolve and learn new skills in fast-changing work environments, and tend to be better decision-makers. Studies on aptitude testing and employee suitability revealed that aptitude tests are twice as predictive as job interviews, three times as predictive as experience, and four times as predictive as education level, Higgins and Sun (2002). Aptitude Testing allows to identify a number of abilities within individuals which can determine how to place them on the job.

Employees, including those of Kenya Prisons Service Department undergo job training to be properly fit the employee to their task. Given that Aptitude Test is an instrument used to determine and measure of an individual's ability to acquire, through future training, some specific set of skills. Based on the foregoing arguments therefore, this study presents an hypothesis that there is no significant relationship between Aptitude Testing and employee selection at Kenya Prison Service.

2.1.3 The Concept of Intelligence Testing and the Process of Employee Selection

An Intelligence Test is a measure of one's intelligence meaning it is a test designed to measure a person's mental aptitude or inherent mental ability, (APA, 2010). Individuals differ from one another in their ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought.

Intelligence is the computational part of the ability to achieve goals in the world. Varying kinds and degrees of intelligence occur in people, many animals and some machines.” McCarthy, (2006). It is the ability to solve hard problems.” Minsky, (2006). “Intelligence is the ability to process information properly in a complex environment. The criteria of properness are not predefined and hence not available beforehand. They are acquired as a result of the information processing.” Nakashima, (2006). While these tests are more valid for jobs of greater complexity and tend to do better predicting training criteria than long term job performance, Intelligence tests generalize across organizations and jobs and have been shown to produce large economic gains for companies that use them (Gatewood & Feild, 1998; Heneman et al., 2000).

An intelligence quotient (IQ) is a total score derived from several standardized tests designed to assess human intelligence, (Stern, 1914). Historically, IQ is a score obtained by dividing a person's mental age score, obtained by administering an intelligence test, by the person's chronological age, both expressed in terms of years and months. The resulting fraction is multiplied by 100 to obtain the IQ score. According to Gottfredson, (2009), when current IQ tests were developed, the median raw score of the norming sample is defined as IQ 100 and scores each standard deviation (SD) up or down are defined as 15 IQ points greater or less although this was not always so historically. By this definition, approximately two-thirds of the population scores are between IQ 85 and IQ 115. About 2.5 percent of the population scores above 130, and 2.5 percent below, (Hunt, 2011). Scores from intelligence tests are estimates of intelligence.

Unlike, for example, distance and mass, a concrete measure of intelligence cannot be achieved given the abstract nature of the concept of intelligence, Markus et al, (2009). IQ scores have been shown to be associated with such factors as morbidity and mortality, parental social status, and, to a substantial degree, biological parental IQ. While the heritability of IQ has been investigated for nearly a century, there is still debate about the significance of heritability estimates and the mechanisms of inheritance, (Turkheimer, et al, 2008).

IQ scores are used for educational placement, assessment of intellectual disability, and evaluating job applicants. Even when students improve their scores on standardized tests, they do not always improve their cognitive abilities, such as memory, attention and speed, Bidwell, (2013). In research contexts they have been studied as predictors of job performance, and income. They are also used to study distributions of

psychometric intelligence in populations and the correlations between it and other variables. Raw scores on IQ tests for many populations have been rising at an average rate that scales to three IQ points per decade since the early 20th century, a phenomenon called the Flynn effect. Investigation of different patterns of increases in subtest scores can also inform current research on human intelligence.

Highhouse & Doverspike, (2015) argue that key aspect of one's intelligence is emotional intelligence (EI). This is the aspect of social competence involving the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions EI is a fairly specific ability that connects a person's knowledge processes to his or her emotional processes, (Goldstein & Passmore, 2017).

Caruso, & Mayer, (2015), established that effective employee selection based on an applicant's EI is one of the most important factor which result to quality of selection and hence a higher level of job performance. Closely related studies by Slaski & Cartwright, (2012), observed that effective intelligence screening during interview and management performance of employees in the actual workplace has a significant positive relationship. Furthermore, theories of performance suggest that employees with high EI would be more proficient in adjusting their own emotions and managing others' emotions in order to create more positive interactions, which could lead to more organizational citizenship behaviours performance.

For Kenya Prisons Service to hire the best employees who fit into the job requirements, a lot of thought and planning need go into designing recruitment and hiring processes, so that, at the end, they will be choosing the best and the right person for the job. Based

on these foregoing propositions, this study has presented hypothesis that there is no significant relationship between Intelligence Testing and effective employee selection.

2.1.4 The Concept of Personality Testing and the Process of Employee Selection

According to the Institute of Psychometric Coaching, (2013), Personality Test assesses your personality and behavioural style through a self-report personality questionnaire, as they relate to the job and workplace environment. The personality test asks relevant questions, which need to be answered by selecting a response from a scale of pre-set answers. Based on the responses a personality profile is developed. This profile can be either desirable or undesirable based on its 'fit' with the position requirements. Most personality tests are designed in a way that also enables employers to learn whether a candidates were 'honest' their responses. Therefore, understanding what each question asks and in what context the question should be answered is crucial to any candidates success in such a test. It is also very important to thoroughly research what the employer is looking for in the job applicant so that they are aware which personality strengths they should emphasize in the test. Some commonly measured personality traits in work settings are extraversion, conscientiousness, openness to new experiences, optimism, agreeableness, service orientation, stress tolerance, emotional stability, and initiative or proactivity. Personality tests typically measure traits related to behaviour at work, interpersonal interactions, and satisfaction with different aspects of work. Personality tests are often used to assess whether individuals have the potential to be successful in jobs where performance requires a great deal of interpersonal interaction or work in team settings. The scores calculated should be between zero and forty and they are Extroversion (E), Agreeableness (A), Conscientiousness (C) and Openness to Experience (O).

Mammolia, (1984), highlighted several positive benefits of personality testing to an institution. The benefits include getting better workers who are more satisfied because they are placed on the job for which they are most competent and interested. Other contribution of personality testing includes their objectivity than any other selection device available. He also added that they reduce absenteeism, reduce rate of accidents and increase morale of the workers. He finally concluded that they reduce to a considerable extent the labour turn over and which in turn may result in reduced cost of training.

Review of the academic literature has found positive correlations between personality test and job success. Furthermore, personality tests used in employee selection account for approximately 25% of an employee's job success while the other 75% of their performance is accounted for by other factors not personality, Mammolia, (1984). Thus, the study proposed a hypothesis that there is no significant relationship between Personality Test and the Employee Selection Process in the Kenya Prisons Service.

2.2 Theoretical Framework of the Study

The concept of Psychological Testing is founded on a number of theories which include among others, The Multiple Intelligence Theory (MIT), The Psychometric Theory, The Item Response Theory (IRT) and The Competency Ice-berg Model, Howard Gardner, (1983).

2.2.1 The Multiple Intelligences Theory – (MIT)

The Multiple Intelligences Theory (MI) was developed by Howard Gardner, a Harvard University Psychologist in 1983. It is also known as the Cognitive Intelligence and was first offered to educational community. The theory of Multiple Intelligences differentiates human intelligence into specific 'modalities', rather than seeing

intelligence as dominated by a single general ability. Gardner proposed the notion that human beings have not just one type of intelligence, but several.

Previously intelligence had been defined by measurable results on standardized intelligence tests. He described seven different types of intelligence in his 1983 book and added an eighth intelligence, and also suggested two others that are still being explored (Gardner, 2009). These types of intelligence are;

Linguistic/Verbal Intelligence: It perceives and responds to voice tones, tempo, rhythm, and word sounds; imitates language and other sounds such as bird song; learns through listening to spoken word, reading, writing, and discussing; proficient in discussing and explaining in written or spoken words, remembers conversations and lecture material; natural command of the language including subtlety of word choice, pronunciation, and semantics; learns languages easily. Skills and Careers for this intelligence are: Writers, Public Speakers, Teachers, Negotiators, Journalists, Editors, Storytellers; Poets; Linguists, Translators; Computer Programmers, etc, (Gardner, 1983).

Logical/Mathematical Intelligence: It uses abstract symbols easily, good at logical problem solving; formulates and tests hypotheses; uses diverse mathematical skills; enjoys complex operations such as maths, physics, or research methods; perceives patterns and relationships among complex components; perceives functions of objects and cause and effect relationships; creates models, hypotheses and theories to explain phenomena, Slavin, (2009). Skills and Careers: Science, Mathematics, Engineering, Computers, Law, Accounting, Pharmacy, Medicine etc.

Musical Intelligence: Learns through listening; remembers and responds to a variety of sounds including human voice, environmental sounds, music; recognizes musical

styles, collects music or musical information, interest in musical instruments and other sound-making devices; easily distracted by sounds or noise in the environment; finds symbolism in music, expresses ideas and feelings through sound and music; composes music, Slavin, (2009). Skills and Careers: Musicians, Music Teacher, Composer, Arranger, Sound Engineer etc.

Bodily-Kinaesthetic Intelligence: Explores and learns through touch and movement; has a natural sense of coordination, balance, grace dexterity and timing; remembers by doing; enjoys concrete learning such as games, role play, physical exercise, model building, and field trips; responds to physical stimulation; interested in health and care of the physical body; naturally invents new approaches to physical skills such as dance movements, athletic techniques, and other physical activities. Skills and Careers: Athletes, Dancers, Massage Therapists, Surgeon, Physical Education Teachers, Builders, Choreography, (Gilman & Lynn, 2012).

Visual Spatial Intelligence: Learns by watching, observing; recognizes shapes and colors and can reproduce them through artwork; perceives three-dimensional space and his place in it accurately; perceives and produces mental imagery, generates mental images for memory and recall; learns from and encodes information in graphs, charts, diagrams and other graphic or visual representations; enjoys doodling, drawing, painting, designing, and other visual creative activities; easily constructs three dimensional mental images and can move them in space, and can project future configurations, Gilman & Lynn, (2012). Skills and Careers: Artist, Designer, Architect, Decorator, Photographer, Videographer, Chess Player, Computer Graphics Designer, etc.

Interpersonal Intelligence: Bonds and interacts easily with others, forming social relationships; relates to others in a variety of ways; easily perceives the thoughts, feelings, motivations, and behaviours of others; interest in diverse lifestyles of others; participates in team and collaborative efforts easily, has ability to influence opinions and actions of others; a natural leader; easily adapts to new social and physical environments; responds well to feedback from others, effective communicator. Skills and Careers: Teaching, Social Work, Counselling, Management, Nursing, Politics, Sales, Administration, Entrepreneur, Parenting etc, (Gilman & Lynn, 2012).

Intrapersonal Intelligence: It makes one of his / her emotions, and finds appropriate expression and outlets for them; has a strong personal ethics code; aware of beliefs and values that motivate him; sets goals and works toward them; works independently; curious about deeper questions in life including meaning, relevance, and purpose; manages his own ongoing learning and personal growth; seeks understanding of his inner experiences; strives for self-actualization; has insights into the complexities of himself and others; naturally empowers others and encourages them to introspection and self-understanding, Slavin, (2009). Skills and Careers: Self-Starter; Student, Psychology, Theology; Spiritual Advisor; Writer etc.

Naturalist Intelligence: It is the natural tendency to classify and discriminate among elements in a complex system; interest in nature and natural phenomena; pattern recognition and ability to categorize and recognize individual examples as belonging to a group; can map and chart relationships, Slavin, (2009). Skills and Careers: Biologist; Geneticist; Veterinarian, Farmer, Rancher; Lab Sciences, Naturalist; Botanist, (Gardner, 1983).

Spiritual Intelligence: This gravitates toward religion, theology, mysticism and the transcendent. Concern with cosmic issues, supernatural, meaning of life's event; spends time in altered states such as meditation, self-hypnosis, and prayer; and connects with others in non-ordinary ways that may help and heal the other. Skills and Careers: Monastic Lifestyles; Minister; Mediator, Alternative Medicine, Yoga and Martial Arts Teachers, (Gilman & Lynn, 2012).

2.2.2 The Psychometric Theory

Psychometric Theory was founded by Louis Leon Thurston, a U.S. pioneer in the fields of Psychometrics and Psychophysics in 1936, Szondi (1960). Psychometrics is the field of study concerned with the theory and technique of Psychological Measurement, which includes the measurement of knowledge, abilities, attitudes, and personality traits. The field is primarily concerned with the study of differences between individuals. According to Gilman & Lynn, (2012), Psychometrics is that area of psychology that specializes in how to measure what we talk and think about.

It is how to assign numbers to observations in a way that best allows us to summarize our observations in order to advance our knowledge. Although in particular it is the study of how to measure psychological constructs, the techniques of psychometrics are applicable to most problems in measurement. Zinbarg & Revelle, (2005), states that the measurement of intelligence, extraversion, severity of crimes, or even batting averages in baseball is all grist for the psychometric mill. Any set of observations that are not perfect exemplars of the construct of interest is open to questions of reliability and validity and to psychometric analysis.

Although it is possible to make the study of psychometrics seem dauntingly difficult, in fact the basic concepts are straightforward. These tests are designed to gauge your

aptitude skills in particular areas as well as your personality profile and determine how appropriate it is for a particular job. The test battery differs from one assessment to the other, however most include two sections: A behavioural psychological section which includes a face-to-face interview, a personality test or questionnaire, a group exercise and an in-tray exercise (for managerial roles) and a testing unit which includes a range of aptitude tests - verbal critical reasoning tests, numerical reasoning tests, abstract (diagrammatic) reasoning tests and in some cases specialty niche tests. Preparing for your psychometric test will improve your results and strengthen your psychological state of mind, increasing your chances of success when applying for your desired job, (Zinbarg & Revelle, 2005).

Psychometric Theory involves several distinct areas of study, Rasch, (1960). First, psychometricians have developed a large body of theory used in the development of mental tests and analysis of data collected from these tests. This work can be roughly divided into classical test theory (CTT) and the more recent item response theory (IRT). An approach which is similar to IRT but also quite distinctive, in terms of its origins and features, is represented by the Rasch model for measurement. The development of the Rasch model, and the broader class of models to which it belongs, was explicitly founded on requirements of measurement in the physical sciences, (Rasch, 1960).

Second, Psychometricians have developed methods for working with large matrices of correlations and co-variances. Techniques in this general tradition include factor analysis (finding important underlying dimensions in the data), multidimensional scaling (finding a simple representation for high-dimensional data) and data clustering (finding objects which are like each other). In these multivariate descriptive methods, users try to simplify large amounts of data, (Gardner, 1983). More recently, structural

equation modelling and path analysis represent more sophisticated approaches to solving this problem of large covariance matrices. These methods allow statistically sophisticated models to be fitted to data and tested to determine if they are adequate fits. The field is primarily concerned with the study of differences between individuals. It involves two major research tasks, namely: (i) The construction of instruments and procedures for measurement (ii) The development and refinement of theoretical approaches to measurement.

Much of the early theoretical and applied work in psychometrics was undertaken in an attempt to measure intelligence. The origin of psychometrics has connections to the related field of psychophysics. Spearman (1983), pioneered psychometrics and approaches to the measurement of intelligence in psychophysics. Thurstone, (1999), later developed and applied a theoretical approach to the measurement referred to as the law of comparative judgment, an approach which has close connections to the psychophysical theory.

Assessment may refer to: Educational assessment, the process of documenting knowledge, skills, attitudes, and beliefs. Health assessment, a plan of care that identifies the specific needs of the client and how those needs will be addressed by the healthcare system. Psychiatric assessment, a process of gathering information about a person within a psychiatric or mental health situation with the purpose of making a diagnosis, (Zinbarg & Revelle, 2005).

2.2.3 Item Response Theory (IRT)

Item Response Theory (IRT) was propounded by Frederic M. Lord in late 1940s. It was later improved by a Danish Mathematician Georg Rasch in 1970s and an Austrian Sociologist Paul Lazarsfeld, in 1980s. Item Response Theory (IRT) is concerned with

accurate test scoring and development of test items. According to Embretson & Reise (2013), Item Response Theory (IRT) also known as Latent Trait Theory, Strong True Score Theory, or Modern Mental Test Theory, is a paradigm for the design, analysis, and scoring of tests, questionnaires, and similar instruments measuring abilities, attitudes, or other variables. Unlike simpler alternatives for creating scales evaluating questionnaire responses it does not assume that each item is equally difficult. This distinguishes IRT from, for instance, the assumption in Linkert Scaling that, ‘all items are assumed to be replications of each other or in other words items are considered to be parallel instruments’. By contrast, Item Response Theory treats the difficulty of each item as information to be incorporated in scaling items.

The Item Response Theory (IRT), is among a family of mathematical models that attempt to explain the relationship between latent traits (unobservable characteristic or attribute) and their manifestations (i.e. observed outcomes, responses or performance). They establish a link between the properties of items on an instrument, individuals responding to these items and the underlying trait being measured. IRT assumes that the latent construct (e.g. stress, knowledge, attitudes) and items of a measure are organized in an unobservable continuum. Therefore, its main purpose focuses on establishing the individual’s position on that continuum, (Embretson, & Reise, 2013).

It is based on the application of related mathematical models to testing data. Because it is generally regarded as superior to Classical Test Theory, it is the preferred method for developing scales in the United States, especially when optimal decisions are demanded, as in so-called high-stakes tests e.g. the Graduate Record Examination (GRE) and Graduate Management Admission Test (GMAT). They might be multiple choice questions that have incorrect and correct responses, but are also commonly

statements on questionnaires that allow respondents to indicate level of agreement (a rating or Likert Scale), or patient symptoms scored as present/absent, or diagnostic information in complex systems, (Embretson & Reise, 2000).

2.2.4 The Competency Ice-Berg Model

The Competency Ice-Berg Model of Staff Selection provides an absolute way of identifying the competencies of employees, Goodman, (2002). An employee's level of competence in different areas determines his/her potential for meeting the standards of a specific position. For instance, a salesperson promoted to be a sales manager not only requires ambition, but he/she also needs the ability to motivate employees. As a small business owner, you can evaluate your staff through observations and interviews to determine their competencies and place them accordingly within your organization. The Iceberg Model for competencies takes the help of an iceberg to explain the concept of competency. An iceberg which has just one-ninth of its volume above water and the rest remains beneath the surface in the sea. Similarly, a competency has some components which are visible like knowledge and skills but other behavioural components like attitude, traits, thinking styles, self-image, organizational fit etc. are hidden or beneath the surface, (Goodman, 2002).

Goodman, (2002), defines The Iceberg Model of staff selection as a way of thinking about the characteristics that might make a candidate make a good choice for a particular position in an organization. The visible part of an iceberg is much smaller than the part that remains hidden underwater. Similarly, the objective facts about a potential employee are often much less important than intangible personal qualities he might bring to your company. Psychometric assessments are a popular method for not

just assessing the competencies but also understanding the strengths, personality types and motivation of the candidates, Goodman, (2002).

There are psychometric tests (Aptitude Tests) which measure specific competencies like teamwork, sales orientation, emotional quotient etc. Cognitive ability tests provide great information regarding the aspects like conceptual problem solving, business and financial acumen etc. Psychometric thus offer a good avenue of understanding the submerged attributes about candidates during the selection process.

Hidden Competencies: Choosing the right person for the job is a difficult yet crucial task for any organization, especially if the organization values creative thinking and innovative solutions over rote performance of standardized tasks.

A resume can only tell about the skills and knowledge potential employees can bring to the job based on their previous education and work experience Goodman, (2002). It cannot unveil much about the deeper and potentially more significant characteristics these candidates might possess, such as personality traits or motivation. In the Competency Iceberg Theory of staff selection, skills and knowledge are represented as the tip of the iceberg, the part that is visible above the water. Personality traits, self-image, social role and motivation are represented by the part of the iceberg that is hidden beneath the water.

There are various levels of thinking. According to Measom, (2011), Determining knowledge and skill involves testing candidates or asking them to demonstrate a skill. Determining an employee's understanding of her social role would involve observing her behaviour as it relates to her staff position. For instance, note if an employee treats her co-workers with respect and works with them to achieve business-related goals. Also, look for signs to gain insight into an employee's self-image. For instance, an

employee with a negative self-image may display aggressive behaviours such as bragging, criticisms and bullying. The employee may exhibit passive behaviours, including lethargy, increased absences and lack of motivation, Measom, (2011).

Determining traits and motives also involves observations as follows;

The Event Level: According to Gerber, (2011), the event level is one at which we typically perceive the world for instance, waking up one morning to find we have caught a cold. While problems observed at the event level can often be addressed with a simple readjustment, the iceberg model pushes us not to assume that every issue can be solved by simply treating the symptom or adjusting at the event level.

The Pattern Level: If we look just below the event level, we often notice patterns. Similar events have been taking place over time we may have been catching more colds when we have not been resting enough. Observing patterns allows us to forecast and forestall events.

The Structure Level: Below the pattern level lies the structure level. When we ask, “What is causing the pattern we are observing?” the answer is usually some kind of structure. Increased stress at work due to the new promotion policy, the habit of eating poorly when under stress, or the inconvenient location of healthy food sources could all be structures at play in our catching a cold. According to Gerber, (2011), structures can include the following: a) Physical things like vending machines, roads, traffic lights or terrain. b) Organizations like corporations, governments, and schools. c) Policies like laws, regulations, and tax structures and d) Rituals habitual behaviours so ingrained that they are not conscious.

The Mental Model Level: Mental models are the attitudes, beliefs, morals, expectations, and values that allow structures to continue functioning as they are. These

are the beliefs that we often learn subconsciously from our society or family and are likely unaware of. Mental models that could be involved in us catching a cold could include: a belief that career is deeply important to our identity that healthy food is too expensive, or that rest is for the unmotivated Gerber, (2011).

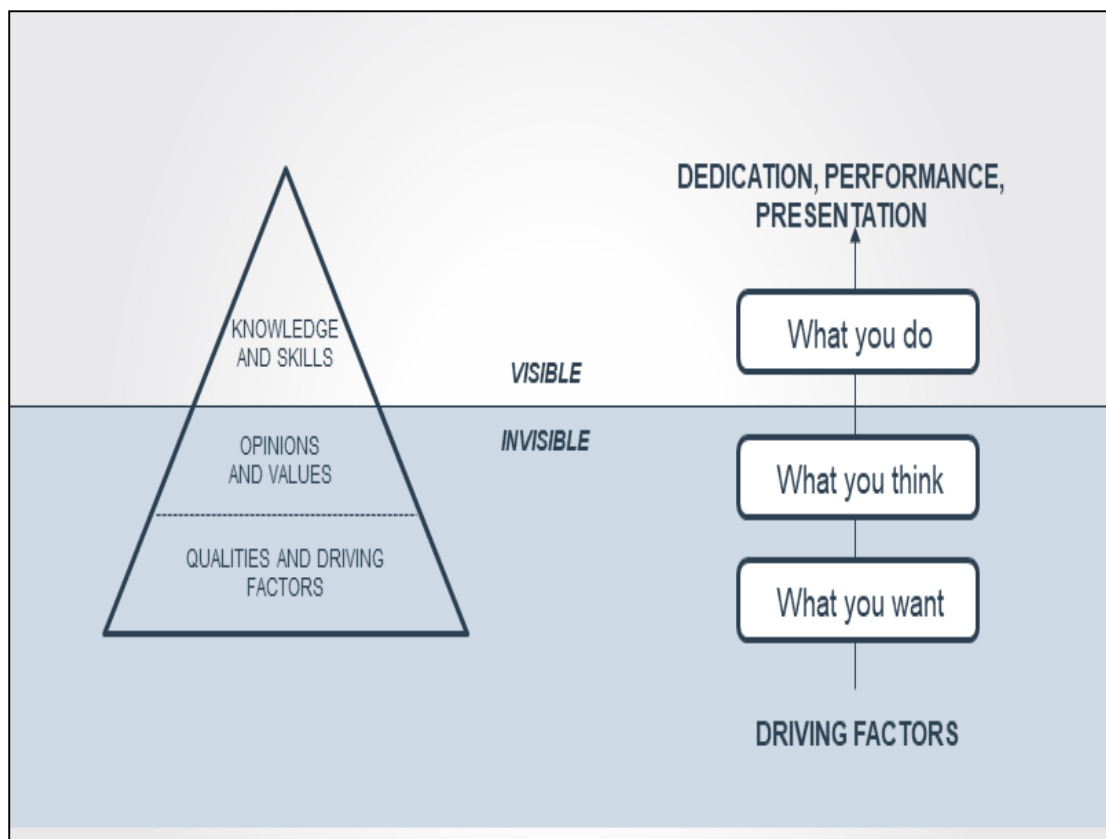


Figure 2.1: The Competency Ice-Berg Model

Source: Adapted from The Iceberg Model by M. Goodman, 2002. Hopkinton, MA: Innovation Associates Organizational Learning.

According to Goodman, (2002), the Iceberg Model of Staff Selection provides an objective way of picking of candidates not only by basing on a criterion that puts into consideration the visible physical attributes like what is presented on paper but also identifying the hidden potential relevant to certain tasks of a job. The Mode allows a critical and Systematic Evaluation of the selection process as below;





Job Analysis Process 	<p>The systematic study of job content in order to determine the major duties and responsibilities of the job. Allows the organization to determine the important dimensions of job performance. The major duties and responsibilities of a job are often detailed in the job description.</p>
Identification of KSAs or Job Requirements 	<p>Drawing upon the information obtained through job analysis or from secondary sources such as O*NET, the organization identifies the knowledge, skills, and abilities necessary to perform the job. The job requirements are often detailed in a document called the job specification.</p>
Identification of Selection Methods to Assess KSAs 	<p>Once the organization knows the KSAs needed by job applicants, it must be able to determine the degree to which job applicants possess them. The organization must Once the organization knows the KSAs needed by job applicants; it must be able to determine the degree to which job applicants possess them. The organization must Selection methods include, but are not limited to, reference and background checks, interviews, cognitive testing, personality testing, aptitude testing, drug testing, and assessment centres.</p>
Assessment of the Reliability and Validity of Selection Methods 	<p>The organization should be sure that the selection methods they use are reliable and valid. In terms of validity, selection methods should actually assess the knowledge, skill, or ability they purport to measure and should distinguish between job applicants who will be successful on the job and those who will not.</p>
The Use of Selection Methods to Process Job Applicants	<p>The organization should use its selection methods to make selection decisions. Typically, the organization will first try to determine which applicants possess the minimum KSAs required. Once unqualified applicants are screened, other selection methods are used to make distinctions among the remaining job candidates and to decide which applicants will receive offers.</p>

Figure 2.2: The Stages in Employee Selection Process

Source: Adapted from Gatewood and Field, 2001.

The Multiple Intelligence Theory, The Psychometric Theory and the Item Response Theory are fundamental in providing an in-depth understanding the variables in this study. The theories provide a basis for understanding each variable comprehensively as such it is possible to develop hypotheses that can help us in knowing the absolute effect of the independent variables on the dependent variable.

2.3 Empirical Review

A test may be defined simply as a measuring device or procedure. According to Hamera & Brown, (2000), the term psychological test refers to a measuring device or procedure designed to measure variables related to psychology, for example, (intelligence, personality, aptitude, interests, attitudes, and values).

2.3.1 Psychological Tests and Testing

Embretson & Reise (2000) define psychological tests as written, visual, or verbal evaluations administered to assess the cognitive and emotional functioning of people. Psychological tests are one area that forms core determinant of the success or failure of the organizational performance. A psychological test therefore can be defined as the predetermination of a sample of behaviour in individuals which is obtained under standardized conditions through established rules for scoring, or for obtaining quantitative (numeric) information from the behaviour sample. According to Sternberg, (2004), Psychological Tests are found within the field of psychometrics. Psychometrics is a field of study concerned with the theory and technique of psychological measurement. One part of the field is concerned with the objective measurement of skills and knowledge, abilities, attitudes, personality traits, and educational achievement, Embretson & Reise (2000). For example, some psychometric researchers have, thus far, concerned themselves with the construction and validation

of assessment instruments such as questionnaires, tests, raters' judgments, and personality tests.

Smith and Smith, (2005) have defined tests as “carefully chosen, systematic, standardized procedures for evoking a sample of responses from a candidate, which are evaluated in a quantifiable, fair and consistent way.” Psychometric tests refer to all techniques that have been created for measuring a feature of psychological functioning. These tests are derived from the psychometric model of human behaviour (Malim and Birch, 1998). According to this model, “all behaviour is explicable in terms of factors of ability, personality, motivation and state or mood together with the situation in which individuals find themselves” (Kline, 1992: 101). Psychometric Tests may be divided into three main categories;

First, those measuring psychological characteristics, such as ability tests, personality tests, aptitude tests, and motivational tests (Malim and Birch, 1998; Smith and Smith; 2005). Second, those using different methods of measurement, for example in group versus individual tests, direct versus indirect ones, and typical versus maximal performance tests (Abbas, 1996; Fincham and Rhodes, 2005; Smith and Smith; 2005). Third, those measuring the qualifications of the user at four levels, ranging from very simple tests requiring minimal skills and knowledge, to specialised, intricate tests requiring long and specific training (Smith and Smith; 2005).

Carlson et al., (2014), defined a Psychological Test as an objective and standardized measure of a sample of behaviour. The term sample of behaviour refers to an individual's performance on tasks that have usually been prescribed beforehand. The samples of behaviour that make up a paper-and-pencil test, the most common type of test, are a series of items. Performance on these items produces a test score. A sample

item on a personality test, for example, might ask test-takers to rate the degree to which they agree with the statement "I talk to a lot of different people at parties" by using a scale of 1 ("strongly disagree") to 5 ("strongly agree"). The most widely used objective tests of personality is the Minnesota Multiphasic Personality Inventory (MMPI) which was originally designed to distinguish individuals with different psychological problems. Since then, it has become popular as a means of attempting to identify personality characteristics of people in many every-day settings. In addition to self-report inventories, there are many other methods for assessing personality, including observational measures, peer-report studies, and projective tests (e.g. the TAT and Ink Blots).

Kaplan & Robert, (2013), define Psychological Tests as written, visual, or verbal evaluations administered to assess the cognitive and emotional functioning of people. Psychological tests are one area that forms core determinant of the success or failure of the organizational performance. There are some techniques that are involved with Psychological Tests. These techniques are; Ability Tests, Personality Tests, Intelligent Tests, Attainment Tests and Aptitude Tests among others. These techniques have been found essential in the organizational performance since they assist in differential placement or assignment of employees on a more suitable and fulfilling job.

There are some techniques that are involved with psychological tests. These techniques are; ability test, personality test, intelligent test, attainment test and aptitude test. These techniques have been found essential in the organizational performance since they assist in differential placement or assignment of employees on a more suitable job. Mellenbergh, G.J. (2008), states that a psychological test is an instrument designed to measure unobserved constructs, also known as latent variables. Psychological tests are

typically, but not necessarily, a series of tasks or problems that the respondent has to solve. Psychological tests can strongly resemble questionnaires, which are also designed to measure unobserved constructs, but differ in that psychological tests ask for a respondent's maximum performance whereas a questionnaire asks for the respondent's typical performance.

Psychological Tests serve a number of purposes such as; (a) They are used for recruitment and the selection process, alongside other assessment methods to explore the match between the candidate and the role. (b) For career guidance such and interests and values inventories. (c) For assessing suitability for promotion of assignment. (d) To identify training and development needs. (e) To provide information for use in coaching, such as helping an individual understand their strengths and development areas in order to facilitate personal learning and growth. (f) For succession planning, to assess and develop future talent and leadership potential. (g) Helps to profile individuals and teams to assist team selection and development such as self-awareness, understanding and team communication.

Psychometric testing will typically follow your resume submission and an initial interview. Together, the results obtained from these selections tools will paint a picture for the recruiter that will indicate to them whether you can and will do the job, and whether you will fit in.

2.3.2 Psychological Assessment

According to Annie M. Paul, (2007), the purpose of psychological assessment is to make more informed hiring decisions. Many companies consult outside companies to give and assess these tests in an effort to keep the tests unbiased and to help guard against lawsuits. Psychological testing is used to determine, in particular, the ability of

potential employees to work under stressful conditions and to assess the potential of a prospective employee to handle the job effectively under those conditions. Claire W. & David H. (2008), have stated that psychometrics, and their use for testing, profiling and assessment, are a fact of life in many organizations these days.

Sternberg, (2004), states that psychological testing means the use of one or more standardized measurement instruments, devices, or procedures including the use of computerized psychological tests, to observe or record human behaviour and which require the application of appropriate normative data for interpretation or classification and includes the use of standardized instruments for the purpose of the diagnosis and treatment of mental and emotional disorders and disabilities, the evaluation or assessment of cognitive and intellectual abilities, personality and emotional states and traits, and neuropsychological functioning.

2.4 Critiques of the Literature Review

Given the need for the use of standardized procedures, any person administering cognitive or neuropsychological measures must be well trained in standardized administration protocols. He or she should possess the interpersonal skills necessary to build rapport with the individual being tested in order to foster cooperation and maximal effort during testing, Pearson Education, (2015). Additionally, individuals administering tests should understand important psychometric properties, including validity and reliability, as well as factors that could emerge during testing to place either at risk. Many doctoral-level psychologists are well trained in test administration; in general, psychologists from clinical, counselling, school, or educational graduate psychology programs receive training in psychological test administration.

Interpretation of testing results requires a higher degree of clinical training than administration alone. Threats to the validity of any psychological measure of a self-report nature oblige the test interpreter to understand the test and principles of test construction. In fact, interpreting tests results without such knowledge would violate the ethics code established for the profession of psychology APA, (2010). SSA requires psychological testing be “individually administered by a qualified specialist currently licensed or certified in the state to administer, score, and interpret psychological tests and have the training and experience to perform the test”, (Brandt & Gorp, 1999).

According to Buros, (2015), psychological tests are only tools. As such, they do not and cannot make decisions for test users. Decision making is the responsibility of the person who commissioned the use of the test and to whom the test results are made available. The person may be the psychologist who administered the test, but the two roles should not be confused. The test provides a way of gathering information and, if well chosen, will provide accurate and pertinent information, but the use of the information, including a bad decision, is in the hands of the decision maker. Not being aware of this limitation can lead the test user and the person involved to be dependent on the test results and accept them passively. Instead, psychological test results should be used as a source of data, along with other sources of data such as personal history and current circumstances, to assist the test user or the individual to arrive at or make an informed decision.

Psychological tests are often used in an attempt to capture the effects of hypothetical constructs. As in other scientific disciplines, psychology employs constructs that are not directly observable; rather their effects can only be inferred. As such, we need to be aware that sometimes a gap exists between what the psychologist intends to measure

using a psychological test and what a test actually measures. For example, although IQ tests were developed to measure intelligence, we need to be aware that the value of these tests in telling us about a person's intelligence depends very much on our understanding of the construct of intelligence and the type(s) of behaviours included in any particular test, Keats & Keats, (1988). Not being aware of this issue can lead to the development of unwarranted faith in psychological tests and total acceptance of the test results without being aware of their limitations.

Due to continual development or refinement of psychological theories, development of technology and passage of time, psychological tests can become obsolete (i.e., test obsolescence). They may no longer be suitable for use because the theory that their construction was based on has been shown to be wrong or because the content of the items is no longer appropriate because of social or cultural change, Keats & Keats, (1988). In the early part of the twentieth century, for example, church attendance in Western countries was very much higher than it is now and a reasonable level of Bible knowledge could be assumed, Meyer, et al, (2010). A test item might draw on this fact. Although useful then, it might now be far too esoteric to be of any use today. According to the Australian Psychological Society and the American Psychological Association, tests should be revised or updated regularly and normative samples should be kept current, (Weiner, 2003).

Finally, although it may not be the intention of a test developer, sometimes a psychological test can disadvantage a subgroup of test takers because of their cultural experience or language background. A vocabulary test that usefully discriminates levels of verbal ability among children from white, English-speaking, middle class homes may be of no use for this purpose with children with a different sub-cultural experience or

those who do not have English as their first language., (Chaytor & Edgecombe, 2003). This study therefore focus on coming up with a more simplified way that can enable the understanding of Psychological Tests and their applications.

2.5 Research Gaps

The general purpose of the literature review is not to have notes on a whole bunch of different journal articles and books on a particular subject. The purpose is to understand what studies have already been done on the subject and then to identify any glaring gaps in the literature. Identifying gaps in the literature will open up opportunities to add to the body of knowledge within the general subject area. Krathwohl, (1988), points out that literature review should help to provide a context for the research, justify the research, ensure the research has not been done, show where the research fits into the existing body of knowledge, enable the researcher to learn from previous theory on the subject, illustrate how the subject has previously been studied, highlight flaws in previous research, outline gaps in previous research, show that the work is adding to the understanding and knowledge of the field, help refine, refocus or even change the topic. The various sources of the reviewed literature have indeed shown the application and use of various psychological / psychometric tests in employee selection, Krathwohl, (1988).

This research study therefore intends to identify the effects of psychological tests and testing in the selection of personnel in the Kenya Prisons Service. Not such a study has been done especially within the context of the Kenya Prisons Service hence this study will provide a greater opportunity in identifying and understanding the effects of Psychological Tests and Testing in this organization.

2.6 Chapter Summary

The Literature Review has elaborately highlighted psychological tests and testing giving the origin of psychological tests and testing. Started around 19th century and was very much in the selection of soldiers during the First World War and it has grown to what is at present time. The New Science in psychological Testing Approach has taken the practice to all areas of employee selection and other psychological aspects. The theoretical framework presented theories such the Multiple Intelligences Theory (MIT), the Psychometric Theory (PT) and the Item Response Theory (IRT). An appreciation of the principles of psychological Testing have also been visited which include among others Validity, Reliability, Standardization, Norms etc. The various examples of psychological tests that have been discussed include Aptitude Ability Tests, Attainment / Achievement Tests, Cognitive Ability Tests and Personality Tests. The Literature review has also appreciated the practice of Psychological Testing on the global, Regional and local perspectives.

2.7 Conceptual Framework

Psychological Tests help managers in organizations to improve their selection since these tests are more objective and less biased, Gilman & Lynn, (2012). Employee selection may be affected by a number of Psychological Tests such as Ability Tests, Intelligence Tests, Attainment Tests and Personality Tests. According to Kaplan & Robert, (2013), Psychological Tests may be written, visual, or verbal assessments administered to evaluate the rational and emotional functioning of people. Psychological Tests include Ability Tests, Personality Tests, Intelligent Tests, Attainment Tests Interest Tests and Aptitude Tests among others. These tests have been found essential in the organizational performance since they assist in differential placement or assignment of employees on a more suitable and fulfilling job. The use

of psychological tests for selection purposes has also been increasingly in use in recent years McDonnell, (2012).

Mellenbergh, (2014), states that the use of Aptitude Tests which comprise Distinct Capabilities and competences in individuals, Verbal Reasoning, Spatial Reasoning etc; the application of Intelligence Tests which include understanding the Cognitive Ability of Individuals, the ability to make rational decisions of individuals, how people are able to think logically and make sound judgment and have the capability to solve problems and the use of Personality Tests i.e. being able to tell how individuals present Openness to experience, whether they are Extraverts or Introverts or the demonstrate Agreeableness (Sociability) abilities, all are very critical in determining the effectiveness of Employee Selection Process which results to getting right individuals for work, acquiring right talents and skills and being able to identify right people for the specific tasks and jobs.

This is well demonstrated in the Conceptual Framework Figure 1.1 below.

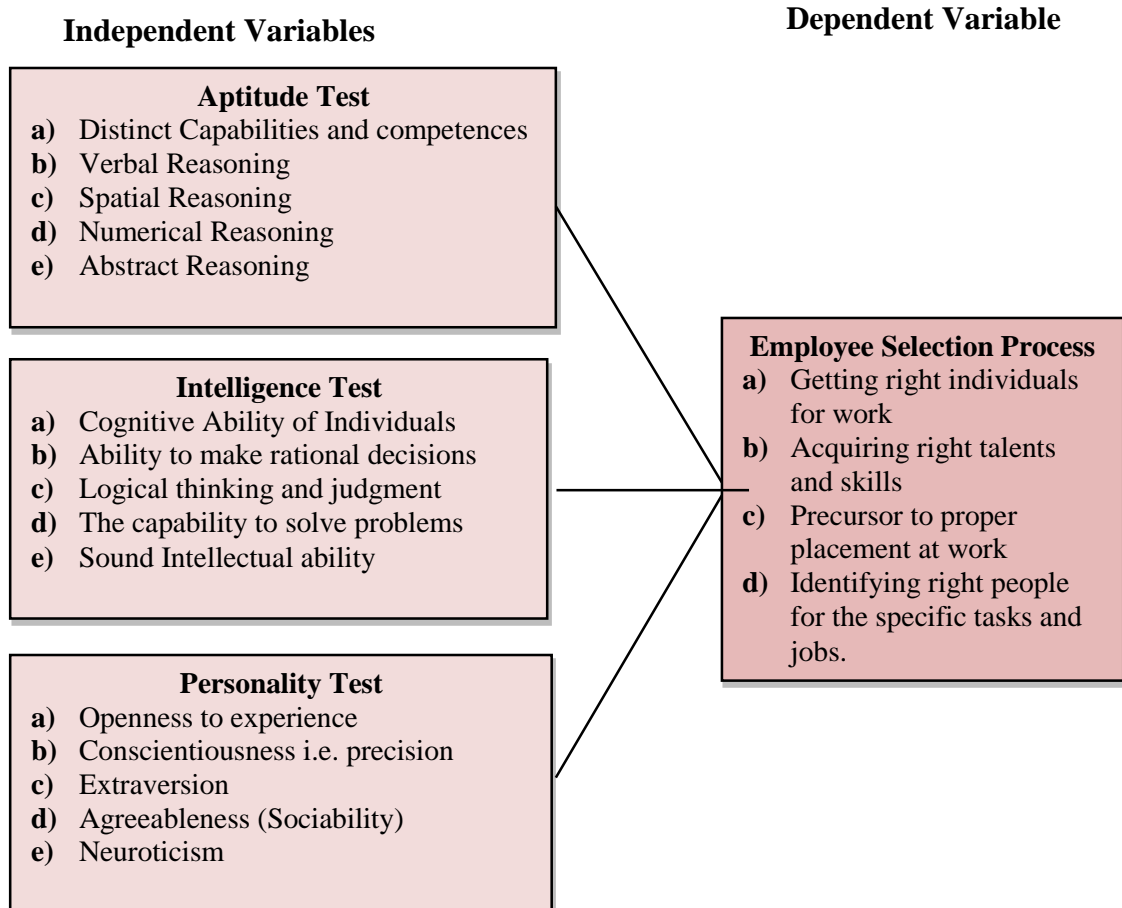


Figure 2.3: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This Chapter has presented the Research Design, Target Population, Sampling Design and Techniques, Sample Size and Research Instruments. It has also highlighted the Data Collection Instrumentations and Techniques, the Pilot Study, Reliability and Validity & Ethical Considerations, Data Collection Procedure, Data Processing, Analysis and Presentation.

3.1 Research Design

Gorard & Stephen, (2013), research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data. The function of a research design is to ensure that the evidence obtained enables you to effectively address the research problem logically and as unambiguously as possible, De Vaus, (2006).

This study adopted an Exploratory Research Design. Exploratory research is defined as a research used to investigate a problem which is not clearly defined. It is conducted to have a better understanding of the existing problem, but will not provide conclusive results. For such a research, a researcher starts with a general idea and uses this research as a medium to identify issues that can be the focus for future research. The Design is useful in providing insights and understanding to a new phenomenon and it is used to test specific hypotheses and examine relationships, Rofianto, (2015).

This study is relatively new within the Prisons setting thus an Exploratory Design will allow an in-depth fact finding study on units of analysis and come up with the hypotheses on the use of psychological tests in employee selection, Creswell, (2011).

3.2 Target Population

The target population is “the entire aggregation of respondents that meet the designated set of criteria” Pearson & Mundform, (2015). The total population of Professional Cadre Personnel in these institutions was about 360 employees, (Annual Report, 2016). The Prisons Institutions are Mombasa Remand, Shimo La Tewa Maximum, Shimo La Tewa Medium Prison, Shimo La Tewa Women, Shimo La Tewa Bortal Institution and the Regional Prisons Head Office. The rule of the thumb for sample sizes in relation to sampling should be to obtain as big a sample as possible.

These professionals are further classified into various sections as follows; Social Psychological Support Services consists of Sociologists, Counsellors and Psychologists. Agriculture Section consists of Veterinary Doctors, Crop Production Officers, Animal Production Officers, and Agricultural Scientists. Industrial Development Section consist of Human Resource Officers, Industrial Relations Officers, Occupational Safety and Health Officers etc. Spiritual Services Section consists of Catechists and Spiritual Workers. The Medical Services Section consists of Nurses, Public Health Officers, Clinical Officers, Laboratory Technologists and Dentists. The Education Section consists of Teachers, Education Officers and Curriculum Development Officers among others.

Table 3.1: Target Population

Section	Target Population
Social Psychological Support Services	109
Agriculture	29
Industrial Development	52
Spiritual Support Services	44
Medical Services	36
Education Sector	90
Total	360

Source: Researcher's Data, 2017

3.3 Study Area

This study was carried out within Six Prisons Institutions found in Mombasa County. Being a relatively new study in the area of psychological Testing and also the fact that Prison Institutions are Security Installations, the researcher used the Six Institutions to be able to overcome the challenges that were associated with access to data and data collection. These challenges would be more if the study was conducted in more than Six Prisons in Mombasa County, notwithstanding the fact that the researcher was also a residence within the Coast region and also undertaking studies from Moi University, Coast Campus.

3.4 Sampling Techniques and Sample Size

There are two broad Methods of groups under which Sampling Techniques can be classified; probability and Non-probability Sampling, Hickman, (2013).

3.4.1 Sampling Techniques

This study adopted Stratified Random Sampling and Simple Random Sampling techniques to select the sample. Stratified Sampling groups a population into homogeneous subjects that share similar characteristics to ensure equitable representation of population in the sample, Kasomo, (2007). The respondents were drawn from the Six Sections which constituted Strata, i.e. Social Psychological Support

Services, Agriculture, Industrial Development, Spiritual Services, Medical Services and Education Sections) across the various penal institutions. Simple Random Sampling technique was used to select members to be included in the final sample. This method allowed each of the member to have equal chances of being selected, Kasomo, (2007).

3.4.2 Sample Size

Creswell, (2012), states that a sample is a smaller but representative collection of units from a population used to determine truths about that population. For Correlational Research design, he suggests 30 cases (items) of the accessible population. For descriptive studies 10% of the accessible population is sufficient while for Exploratory Studies at least 30 items are required per group. The general recommendation however, is that researchers should use the largest possible as statistics obtained from large sample are more accurate than those from smaller samples, Pearson and Mundform, (2015). This study used a sample size of 30% of the target population as in the sampling frame below:

Table 3.2 Sample Size

Section	Target Population	% of Sample	Sample Size
Social Psychological Support Services	109	30%	33
Agriculture Section	29	30%	9
Industrial Development	52	30%	16
Spiritual Services	44	30%	13
Medical	36	30%	11
Education	90	30%	26
Total	360	30%	108

Source: Researcher's Data, 2017

3.5 Units of Analysis

The Units of Analysis in study consisted of Professional Officers from the Kenya Prisons Service, 100 respondents were used.

3.6 Pilot Study

A pilot study was conducted at the Kwale Medium Security Prison which provided a typical set-up similar to the one that would be interacted with by the research during the actual data collection. This allowed testing of the data collection instrumentations and enabled necessary re-adjustments on the entire plan before actual collection of data, Resnik, (2011). Kwale Prison provided a good proximity to the researcher since it is in Kwale County, which borders Mombasa County where the study was being conducted. A total of Twenty (20) Standard Questionnaires were used in the pilot study. To ensure reliability of the Questionnaire, the researcher refined the data collection tools so as to achieve their validity and reliability of the instruments.

3.6.1 Reliability

According to Resnik, (2011), reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. Ethical considerations ensure that principles of fairness and justice are served and any intended biasness is overcome during the research process. To boost reliability of the instruments that were used, a pilot study was used to allow the researcher to make necessary adjustments to the instruments of data collection before the real study was conducted.

Reliability for this study was tested using Cronbach's Alpha Test which is a measure of internal consistency, which is how closely related a set of items are as a group. It is considered to be a measure of scale reliability. Exploratory factor analysis is one method of checking dimensionality, Revelle & Zinbarg, (2009). Cronbach's Alpha is

one of the most widely test of internal reliability of a test item. Cronbach's Alpha has a value that lies between One, 1 (perfectly reliable) and Zero, 0 (not reliable). Nunnery, (2013), points out that a Cronbach's Alpha is said to indicate good internal consistency of the data if Cronbach's Alpha is greater than 0.7.

3.6.2 Validity

Validity is the accuracy and meaningfulness, which are based on the research results, David B. Resnik, (2011). Validity is the degree to which results obtained from the analysis of the data are as close as possible to the expected results of the study. It has to do with how accurately the data obtained in the study represents the variables of the study, Saunders & Thornhill, (2012). To achieve validity in this study, a pilot study was conducted and the results analysed and evaluated to ascertain whether the research instruments were gathering the right data or not. Content validity was used to test the validity of the research instruments.

Research instruments were exposed to experts-Supervisors who checked and corrected the errors before actual data collection was done. Further development of the research instrument was done to ensure that data collected would truly represent the information required to answer the questions that were raised in the study, Saunders & Thornhill, (2012).

3.7 Data Sources, Data Collection Instruments and Data Collection Procedure

The following Data Sources were used in this study and were collected using the stated instruments;

3.7.1 Data Sources

The two major sources of data collection techniques that were used by the researcher are primary and secondary sources.

3.7.2 Primary Data

Primary data refers to information a research obtains from the subjects in the sample. As stated above, this study used structured questionnaires as the main tool for Primary Data collection, Creswell, (2012). Pearson, & Mundform, (2015), states that structured questionnaires enable the respondents to obtain clarification concerning the questions, since they contain structured type of questions that allow respondents to select answers that best describes their situations.

3.7.3 Secondary Data

Secondary data refers to information a researcher obtains from research articles, books and casual interviews, Creswell, (2012). Secondary sources provide overviews of topics by synthesizing information gathered from other resources, Pearson & Mundform, (2015). The resources often provide data in a convenient form or provide information with context by which to interpret it.

3.7.4 Data Collection Instruments

The researcher developed structured questionnaires that were used as a means of collecting data from respondents for primary data. The Structured Questionnaires necessitated the researcher to reach as many respondents as possible within the prescribed time, Pearson, & Mundform, (2015). The Structured Questionnaire had three main parts; Part A aimed to address General Information issues such as Area deployed in and duration of service, Part B which addressed the Independent Variables i.e. Aptitude Tests, Intelligence Tests and Personality Tests and Part C which addressed the Dependent variable, Employee Selection.

This study used document analysis as a method of collecting secondary data. Document analysis comprises of information obtained from company reports, newsletters,

magazine and reports among others. The information that was collected here helped the researcher to gain more insight on the previous selection process and this enabled the researcher to establish means and boundaries for the current research, (Hopkins, 2009).

3.7.5 Data Collection Procedure

The Procedures for Data Collection and Reporting provide guidelines for the collection, processing, analysis, and reporting of research statistics, Kothari, (2010). After the researcher had formulated and tested the instruments for data collection, he obtained introduction and authorization letters from Moi and County Commissioner and the County Director for Basic Education Mombasa County respectively, allowing him to carry out the study.

The researcher also sought a research permit from the National Commission of Science and Technology, (NACOSTI) as it is the procedure for any research studies at the post graduate level. The researcher got permission from the Prisons Administration for Mombasa County to be allowed to conduct the research there. Questionnaires were dropped and then later picked. Follow-ups were done through phone calls and personal visits.

3.8 Data Processing, Analysis and Presentation.

Data processing, Analysis and Presentation was in the study was carried out as follows;

3.8.1 Data Processing

Data processing refers to the process of converting data from one format to another. It transforms plain data into valuable information, Thornhill, (2012). The main Data processing techniques that were used included, data cleansing, sorting, editing, coding, classification, tabulation and validation. Each of the returned questionnaire was clearly scrutinized, editing was done and other information extracted from them. Information

collected from document analysis was also evaluated and validated. Responses from same questions were coded and different classes formed to accommodate responses from each category of questions. This was well managed by means of frequency tables.

3.8.2 Data Analysis

Analysis of the processed data was done with the aid of SPSS Version 21, which is a Statistical Software tool of analysis used for logical batched and non-batched statistical analysis, Kdnuggets, (2013). SPSS is a widely used program for statistical analysis in social science, (Field, 2013). Data analysis was done by Frequencies, Means and Standard Deviations, Correlation Analysis, ANOVA, and Multiple Regression Analysis.

This study used Correlation Analysis, Regression Analysis and ANOVA as a way of Quantitative Analysis of the Data variables i.e. Aptitude Test, Intelligence Test, Personality Test and Employee Selection to show the nature of association whether strong, negative positive, weak, or statistically significant. Analysis of Variance (ANOVA), tries to determine whether or not the means of two sampled groups is statistically significant or due to random chance, Field, (2013). Correlation Analysis was used to establish effects of variables of interest; the effect of independent variables and dependent variable in a study.

3.8.3 Correlation Analysis

Correlation analysis was used to describe the degree to which one variable is related to the other given that the analysis allowed for outcome of the effect of variables to be established. In this study, the coefficient of correlation (r) was estimated to determine the nature/direction and magnitude/strength of the effects of Employee Selection and the three independent variables, (Aptitude Tests, Intelligence Tests and Personality

Tests). In addition, the coefficient of determination (r^2) was used to determine the proportion of the variance of Employee Selection that is predictable from the independent variables. It is a measure that allowed us to determine how certain one can be in making predictions from a certain model as it represents the percent of the data that is closest to the line of best fit.

For interpretation, the regression coefficients B_i were indicated if there existed a relationship between Employee Selection and the independent variables in the model. A correlation coefficient of any value but zero indicates existence of a relationship whereas a zero coefficient indicates no relationship. A positive sign on the regression coefficient indicates that an increase in the respective independent variable results in an increase in the dependent variable whereas a negative sign indicates that a decrease in the respective independent variable results in a decrease in the dependent variable. In measuring the percent of the data that is closest to the line of best fit, the coefficient of determination ranges between +1 and -1. When the coefficient is between 0.5 and 1, there is a strong positive relationship and a strong negative relationship when the coefficient is between -0.5 and -1. If it is between 0 and 0.5, there is a weak positive relationship between Employee Selection and the independent variables and a weak negative relationship when the coefficient is between 0 and -0.5.

The Pearson Correlation was used to test the three Null Hypotheses; H01, H02 and H03. The test was set at 0.05 significant levels. The .05 Significant Level is the probability of rejecting a true null hypothesis, that is, the probability of committing type I error, (Field, 2013). The rejection criteria of the null hypothesis is that at a p-value greater than 0.05 we fail to reject the null hypothesis in favour of the alternative. If the p-value is less than 0.05, we reject the null hypothesis that there's no significant relationship the

various Psychological Tests and Employee Selection and conclude that a significant relationship indeed does exist.

3.8.4 Regression Analysis

Regression Analysis was used to determine whether one variable is a predictor of another variable. The data analysis involved the use of a multiple regression model given that various variables were adopted as independent variables.

The regression model used is:

$$Y = a + bx_1 + bx_2 + bx_3 + e \dots\dots\dots$$

Where:

- Y** Is Selection Effectiveness,
- a** Is a constant,
- x₁, x₂ & x₃** Is the effect of Aptitude, Intelligence and Personality Tests, on Selection Process
- b** Is the coefficient of **x₁**, **x₂** and **x₃** respectively.
- e** Is the error term..

3.8.5 Data Presentation

Presentation of Statistical Information in this research was done by means of frequency distribution tables and percentages which enabled the researcher to summarize the findings in order to establish the overall trends of this study.

3.9 Ethical Considerations for the Study

In any research study, care was taken to ensure strict observance of ethical principles, standards and codes. In the first place, every participant in the study was notified of the

aims, methods, anticipated benefits and potential hazards of the research, and his/her right to abstain from participation in the research and his/her right to terminate participation at any time, Resnik, (2011). This allowed them to have a clear picture of what the study was all about and to make sound decisions on whether to take part in it or not.

Besides that, no coercion or inducement of any kind was used to encourage an individual to become a subject of this study. This was in tandem with the general principle of voluntary and informed consent where respondents must be told the truth and given facts about the research in order to make an informed decision about participating or not. The researcher, having clearly indicated to the respondents all that the study entailed, allowed them the chance to make decision on whether to take part in the study or not.

Identity of participants in the study was kept strictly confidential. The researcher can disclose information about particular individual but protect the identity and privacy of the individual's anonymity. This is to ensure that any cases of victimization, unfair treatment or persecution are avoided against respondents since some information in research work are so sensitive or highly classified. As an ethical requirement respondent should be protected by keeping the information confidential. At the conclusion of the study, any information that could reveal the identity of the participants in the study was utterly destroyed. As part of ethical consideration, the study instruments were designed in a manner that helped to avoid highly intrusive, offensive and immoral items, (Kothari, 2010).

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter has analysed data and presented the study findings of each variable using the frequency tables and charts. Correlation and Multiple Regression Analysis techniques are used to identify the effect of Psychological Tests on Selection of Professional Employees in Kenya Prisons Service.

4.1 Response Rate

A total of 108 questionnaires were distributed to the targeted respondents. Out of this 100 questionnaires had been clearly filled. This puts the number of questionnaires that were used for analysis in this study at a response rate of 92%. This response rate was way above the recommended rate of at least 70%, (Field, 2013).

4.2 General Information

The study made an inquiry into the various Sections in the organization and the length of service in employment for employees was established. The various Sections were Social Psychological Support Services, Education Sector, Medical Services, Spiritual Services, Industrial Development and Agriculture. The results of the findings were presented in tables 4.1;

4.2.1 Sections in the Prison Institutions

This study made an inquiry into the various Sections in the Prison Institutions where employees worked. These Sections were presented in table 4.1 below.

Table 4.1: Sections in the Organization

Section	Frequency	Percentage	Cumulative %
Social Psychological Support Services	30	30.0	30.0
Industrial Development	15	15.0	45.0
Spiritual Services	12	12.0	57.0
Medical Services	10	10.0	67.0
Agriculture	8	8.0	75.0
Education	25	25.0	100.0

Source: Researcher's Data, 2017

The results presented in table 4.2 above revealed that a majority of respondents worked under Social Psychological Support Services Section (30.0%, n = 30) followed by Education Section at 25.0% (n = 25). The least represented was Agriculture Section at 8.0% (n = 8).

The result thus imply that the opinions concerning psychological testing and employee selection at the Kenya Prisons Service was mostly representing the views of Social Psychological Support Services, Education, Medical Services, Spiritual Services and Industrial Development. The results further imply the sections are generally well represented with the least representation in Agriculture section.

4.2.2 Length of Service of Employees

The results of length of service for the employees in the organization were presented in table 4.2 below;

Table 4.2: Length of Service of Employees

Duration	Frequency	Percentage (%)	Cumulative (%)
< 1 Year	18	18.0	18.0
1-5 Years	14	14.0	32.0
6-10 Years	28	28.0	60.0
> 10 Years	40	40.0	100.0
Total	100	100.0	

Source: Researcher's Data, 2017

From Table 4.2 above, employees with more than 10 years of service was (40%) followed by those who had worked for between 6 to 10 years at 28%. So cumulatively, 32% of the employees had worked for less than 5 years. Majority employees (68%) had worked for six years and more indicating that a majority had been in the service for a long enough with job experience to make them more effective employees. This conclusion is based on the argument by Aquinas, (2009); that the longer the experience, the higher the level of performance all other factors being held constant.

4.3 Reliability and Validity Results

4.3.1 Reliability Results

Reliability for this study was tested using Cronbach's Alpha Test. Cronbach's Alpha refers to a measure of internal consistency of an instrument. It is a value that lies between One, 1 (perfectly reliable) and Zero, 0 (not reliable). Nunnery, (2013), points out that a Cronbach's Alpha is said to indicate good internal consistency of the data if Cronbach's Alpha is greater than 0.7. The Cronbach's Test was run on all the study variables and the result presented in table 4.3 below;

Table 4.3: Cronbach's Reliability Statistics

Variable	N	Alpha	Decision
Aptitude Test	4**	.738	Accept
Intelligence Test	6	.768	Accept
Personality Test	6	.782	Accept
Employee Selection	5	.856	Accept

Key: ** 2 items were deleted

Source: Researcher's Data, 2017

From the Table above, all the constructs met the requirements of the Cronbach's Alpha Test as per reliability statistics realized out of this test. Aptitude Test variable initially had 6 items with unacceptable low Cronbach's Alpha value ($n = 6, \alpha = .678$) which was way below recommended of 0.7. Based on the suggestion by McCrae *et al.*, (2011), that some items to be deleted if their deletion improves reliability, 2 items were deleted and it improved the reliability of aptitude scale to acceptable level ($n = 4, \alpha = .738$). However, Intelligence Test ($n = 6, \alpha = .768$), Personality Test scale ($n = 6, \alpha = .782$) and finally, Employee Selection scale ($n = 5, \alpha = .790$) had alpha coefficient values all greater than the threshold value of 0.7.

The Cronbach's Alpha (α) for the study variables were as follows; Aptitude Tests ($\alpha = 0.738$), Intelligence Test ($\alpha = 0.768$), Personality Tests ($\alpha = 0.782$) and Employee Selection ($\alpha = 0.856$). Cronbach's Alpha is an important concept in the evaluation of assessments and questionnaires, (Tavakol & Dennick, 2011).

4.3.2 Validity Results

Validity is the accuracy and meaningfulness, which are based on the research results, Resnik, (2011). Research instruments were examined for a second time by Supervisors

and verified to have maintained the same ability of yielding consistent internal results, Saunders & Thornhill, (2012).

4.4 Analysis of Study Objectives

The various variables forming the objectives of this study were; Aptitude Test (AT), Intelligence Test (IT), Personality Test (PT) and Employee Selection (ES).

4.4.1 Aptitude Test (AP) and Employee Selection (ES)

The respondents agreed that Aptitude Tests are critical to the quality of employee as the interview itself ($m = 7.80$, $SD = 1.15$). Again they agreed that Aptitude Tests results are essential in matching the right candidate to the task applied for ($m = 7.24$, $SD = 1.18$). However the respondents partially agreed that Aptitude Test were intensively conducted during selection of employees ($m = 6.40$, $SD = 1.20$) and that there lacked a Standard Aptitude Test Questionnaire used during selection.

Indicating that majority underwent undergo the Aptitude Testing during selection. As such not most sections in Kenya Prisons Service had employees who underwent Aptitude Testing during employee selection. This is well illustrated in table 4.3 below;

Table 4.4: Mean and Standard Deviations Aptitude of Testing (AP)

Research Question	N	Mean	SD.
AP are critical to the quality of employee as the interview itself	100	7.80	1.15
AP results in matching the right candidate to the task applied for	100	7.24	1.18
I underwent a comprehensive Aptitude Testing during Selection	100	6.40	1.33
AP are intensively and rigorously conducted during employee selection	100	6.40	1.20
There is a Standard Aptitude Questionnaire used in the selection process	100	5.80	1.33
Grand Mean	100	3.36	1.24

Source: Researcher's Data, 2017

These results indicate that the employees appreciated the significance of Aptitude Tests on matching the right candidate to the task applied for. With a Mean of 3.36, indicating a moderate agreement on the effect of Aptitude Tests on Employee Selection in Kenya Prisons Service.

4.4.2 Intelligence Test (IT) and Employee Selection (ES)

Respondents agreed that Intelligence Tests are critical as the interview itself during the selection process ($m = 7.44$, $SD = 1.20$) and these tests results in matching the right candidate to the task applied for ($m = 7.12$, $SD = 1.072$). Conversely the respondents were neutral when prompted whether a Standard Intelligence Questionnaire was used during the employee selection process ($m = 5.92$, $SD = 1.37$) and if Intelligence Tests are adequately applied during recruitment of employees here ($m = 5.92$, $SD = 1.07$)

Out of 100 respondents, 68 of representing 68% were of the opinion that Intelligence Tests are critical as the interview itself. However, only less than half, i.e. 42 respondents represented by 42% pointed out that they had undergone a comprehensive Intelligence Test during recruitment process. The result implied that a majority had not undergone IT during selection. This suggested that intelligence tests were not fully used during the interview process. These results suggested that there was very little application and use of Intelligence Test during the employee selection process. This had an effect of making this organization miss out on finding the best match of employee abilities to the required job skills. This is the case on the basis that psychometric tests help prospective employers to find the best match of individual to job requirements which eventually leads in acquiring the most suitable persons to join an organization as employees. Psychometric Tests thus could form a better selection criteria in ensuring right persons

are picked from the pool for specific jobs. These results are well illustrated in Table 4.5 below;

Table 4.5: Mean and Standard Deviations of Intelligence Testing (IT)

Research Question	Mean	SD
IT are critical as the interview itself	7.44	1.20
IT results in matching the right candidate to the task applied for	7.12	1.07
IT are intensively and rigorously conducted during selection of employee	6.08	1.12
There is a Standard Intelligence Questionnaire used during selection	5.92	1.37
Intelligence tests are adequately applied during recruitment of employees	5.92	1.07
Grand Mean	3.25	1.17

Source: Researcher's Data, 2017

These results indicate that the employees acknowledged the significance of Intelligence Tests on matching the right candidate to the task applied for with a Mean of 3.25, indicating a moderate agreement on the effect of Intelligence Tests on Employee Selection in Kenya Prisons Service.

4.4.3 Personality Tests (PT) and Employee Selection (ES)

The Researcher wanted to establish the relationship between Personality Test and Employee Selection process in an organization. The researcher sought to know if PT was critical in the selection interview, if it was helpful in ensuring that the selected candidates would eventually be suitable for the tasks and jobs they were recruited for and whether this Test was applied adequately in the recruitment process.

Respondents agreed that Personality Tests were as critical as the interview itself, ($m = 7.60$, $SD = 1.23$), Personality Tests results in matching the right candidate to the task applied for ($m = 7.48$, 1.07). They were neutral on responding to statements that Personality Tests are adequately applied during recruitment of employees in the Kenya

Prisons Service and if there is a Standard Personality Questionnaire used during selection ($m = 6.12$, $SD = 1.39$). This relationship has been demonstrated through Table 4.6 below which has presented the Mean and Standard Deviations of Personality Test in this study.

Table 4.6: Mean and Standard Deviations of Personality Test (PT)

Research Question	Mean	SD
Personality Tests are critical as the interview itself	7.60	1.23
Personality Tests results in matching the right candidate to the task applied for	7.48	1.07
I underwent a comprehensive Personality Test during recruitment	6.84	1.16
Personality Tests are adequately applied during recruitment of employees	6.36	1.10
There is a Standard Personality Questionnaire used during the selection process	6.12	1.39
Grand Mean	3.44	1.19

Source: Researcher's Data, 2017

These results indicate that the employees acknowledged the significance of Personality Tests on matching the right candidate to the task applied for. With a Mean of 3.44, indicating a moderate agreement on the effect of Intelligence Tests on Employee Selection in Kenya Prisons Service. The link between Personality and Emotional Intelligence to job performance is compelling, Duckworth, et al, (2008). Though there is strong evidence that cognitive measurement tools are good predictors of job success, one important reason which makes them not to be perfect predictors is that human personality is an important factor in job success. The neutrality of respondents in this study is a clear indication that Personality Tests may not be common during the employee selection process hence it is easy to deduce that they are not applied.

4.4.4 Employee Selection Process

Generally, the respondents were in agreement to most of the statements on the effective employee selection conducted for Kenya Prisons Service employees. They specifically agreed that an effective Selection process is critical in acquiring the needed job skills ($m = 8.20$, $SD = .92$) and they were satisfied by the selection process they underwent ($m = 7.16$, $SD = 1.23$). However, they were neutral in when asked if the selection process reflects the changing circumstances ($m = 6.84$, $SD = 1.09$) and if employees selected match the required job skills ($m = 6.72$, $SD = 1.12$).

This is presented in table 4.7 below;

Table 4.7: Effectiveness of Employee Selection Process at Kenya Prisons Service

Research Question	Mean	SD
Effective Selection process is critical in acquiring the needed job skills	8.20	0.92
Am satisfied by the selection process I underwent	7.16	1.23
Employee selected are psychologically prepared for the task	7.04	1.00
The selection process reflects the changing circumstances	6.84	1.09
Skills of Employees selected match the required the jobs	6.72	1.12
Grand Mean	7.19	1.07

Source: Researcher's Data, 2017)

These results in table 4.7 indicates the selection effectiveness of Kenya Prisons Service employees With a Mean of 7.19, indicating an effectiveness rate of over than 70% as such the use of psychological Tests in the employee selection improves the effectiveness of the process.

4.5 Quantitative Analysis

This study used Correlation Analysis, Regression Analysis and ANOVA as a way of Quantitative Analysis of the Data.

4.5.1 Correlation Analysis Results

Correlation analysis was used to describe the degree to which one variable is related to the other given that the analysis allowed for effects between variables to be established. In this study, the coefficient of correlation (r) was estimated to determine the nature/direction and magnitude/strength of the relationship between Employee Selection and the three independent variables, (Aptitude Tests, Intelligence Tests and Personality Tests).

In addition, the coefficient of determination (r^2) was used to determine the proportion of the variance of Employee Selection that is predictable from the independent variables. It is a measure that allowed us to determine how certain one can be in making predictions from a certain model as it represents the percent of the data that is closest to the line of best fit. A Correlation Analysis was carried out in order to establish relationships between variables of interest; the relationship between independent variables, (Aptitude Tests, Intelligence Tests and Personality Tests) and dependent variable, (Employee Selection). The purpose was also to test the hypotheses H01, H02 and H03. The result is presented in table 4.8 below.

Table 4.8: Correlation Analysis Results

		AT	IT	PT	Selection
Aptitude Test	Pearson Correlation	1			
	Sig. (2-tailed)	.000			
Intelligence Test	Pearson Correlation	.550**	1		
	Sig. (2-tailed)	.000			
Personality Test	Pearson Correlation	.818**	.576**	1	
	Sig. (2-tailed)	.000	.000		
Employee Selection	Pearson Correlation	.394**	.468**	.481**	1
	Sig. (2-tailed)	.005	.001	.000	

***. Correlation is significant at the 0.01 level (2-tailed). . Likewise n = 100*

Source: Researcher's Data, 2017

The result shows that Aptitude Test and Quality of Selection Process are positively and significantly correlated ($r = .394, p = .005$). For that reason, the first hypothesis, H01 is thus rejected since the p -value $< .05$ and concludes that there is a significant relationship between Aptitude Test and employee selection. This implies that employee selection process that is based on the rigorous aptitude testing would result in getting effective employees. Such a selection process not only results in getting employees who are psychologically prepared for the task but also have skills that matches the required job skills.

Further, Intelligence Tests and Quality of Selection Process are positively and significantly correlated ($r = .468, p < .001$). In this regard, the H02 that there is no significant relationship between Intelligence Test and Employee Selection in Kenya Prisons Service was rejected. Thus it is concluded that there is a significant relationship. Therefore the more intensive the application of Intelligence Test, the more effective the Selection Process.

Similarly, findings indicates that personality Test and effective employee selection are positively are significantly correlated ($r = .481, p < .000$). For that reason the H03 that there is no significant relationship between intelligence test and employee selection in KPS was rejected. Thus it is conclude that there is a significant relationship. This indicates that intensive use of personality test during interview process of candidates, results in effective selection. The positive relation is plausible based on the view that personality has a significant role to play in deciding whether a potential employee has the enthusiasm and motivation that the employer is looking for. It can also be argued that personality determines how well an employee fit in to the organization, in terms of

personality, attitude and general work style. In most working situations it's the personalities of the people involved that affect the day-to-day success of the institution.

Generally, the foregoing correlation results suggest that for the Kenya Prisons Service to improve the quality of employees, they need to employ the psychological testing during interview process. This enable the institution to have the right individuals for work, right talents, skills and proper placement at work. This in turn positive effect on employee productivity in that it motivates the workforce in the institutions.

The summary of hypothesis testing result is presented in Table 4.9.

Table 4.9: Summary of Hypothesis Testing

#	Level of Sig.	Hypothesis	Remarks
H ₀₁	r =.394, p =.005	There is no significant relationship between Aptitude Test and Employee Selection.	Rejected
H ₀₂	r = .468, p <.001	There is no significant relationship between Intelligence Test and Employee Selection.	Rejected
H ₀₃	r = .481, p <.001	There is no significant relationship between Personality Test and Employee Selection.	Rejected

Source: Researcher's Data, 2017

4.5.2 Multiple Linear Regression Analysis

Multiple Linear Regression attempts to model the relationship between two variables by fitting a linear equation to observed data from dependent variable and explanatory variable, Darlington & Hayes, (2016). Regression Analysis has various assumptions that have to be met for the results to be valid. Normality of the data, equal variance and linearity are the key assumptions that underlie linear regression. Linearity assumption

was tested by observing plotted scatter plot of residuals and response values (y). The y values were taken on the vertical y axis, and standardized residuals (SPSS calls them ZRESID) were then plotted on the horizontal x axis.

If the scatter plots follow a linear pattern (and not a curvilinear) that showed that linearity assumption was met. As shown in the result in appendix VI there is no curvilinear pattern. So the linearity assumption was adequately met. From the residual in appendix 2000, the results suggest that the residuals do not funnel out in a triangular fashion that means the equal variance assumption was met as well.

Normality of data was tested by plotting a histogram of the residuals. This was meant to examine the normality of the residuals. If the residuals are not skewed, that means that the assumption is satisfied. The histogram in appendix 3000 describes the typical shape of the normal distribution. As such the result shows that distribution satisfied the normality assumption. Therefore carrying out a linear regression analysis of the data was appropriate

4.5.3 ANOVA

The ANOVA result displays the sum of squares due to regression and due to residuals. It also displays the F ratio value and its significance. The F depicts the significance or the fitness of the regression model. In other words, it states how valid the predictors can predict the dependent variable. The ANOVA are shown in Table 4.9 below;

Table 4.10: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	12.301	3	4.100	9.406	.000 ^b
Residual	20.052	46	.436		
Total	32.353	49			

Source: Researcher's Data, 2017

From the result, the Regression Model connecting the three Psychological Tests and Selection was significant ($F = 9.406, p < .001$).

4.5.4 Regression Coefficient

The Regression Analysis results were as tabulated in Table 4.11 below;

Table 4.11: Regression Coefficient

	Coefficients	Standard Error	t-Stat	P-value
Intercept	1.240	0.484	2.5627	0.0137
Aptitude Testing	1.328	0.579	2.294	0.0347
Intelligence Testing	.556	0.172	3.224	0.0089
Personality Testing	.475	0.179	2.642	0.0112

Source: Researcher's Data, 2017

Table 4.10 represents the Regression Coefficients, the t value and the Significance of the Regressions. Aptitude Test had positive influence on Employees Selection ($\beta = 1.28, p = .0347$), Intelligence Test ($\beta = .556, p = .0089$) and Personality Test ($\beta = .475, p = .011$). These results indicate that Aptitude Test had the most significant effect on selection followed by Personality and Intelligence Tests which had the least effect.

4.5.5 Results of the Regression Model

The results regression model of the study was;

$$Y = 1.24 + 1.328 AP + 0.556 IT + 0.475 PT$$

$$\text{Selection Effectiveness} = 1.24 + 1.328 \text{ Aptitude} + .556 \text{ Intelligence} + .475 \text{ Personality}$$

From the model; if Aptitude and Intelligence Testing are held constant, a 100% improvement in Personality Testing during the selection process will lead to a 47% increase in effective Selection of employee of Kenya Prisons Service. As such, intensifying Personality Testing during the Selection process significantly increased the

probability of selecting employees with great potential to be successful in the workplace. The findings are plausible given that Personality Testing measures traits related to behaviour at work and enable the management to classify prospective applicants according to their mental ability so that the best placement is done with the task requirement in mind.

The regression coefficient for Intelligence Testing during interview process is .556. This means that, if Aptitude and Personality Testing initiatives are held constant, a 100% increase in intelligence testing during interview process, results in about 6% increases in effectiveness of employee selection at Kenya Prisons Department. The contribution of Intelligence Testing to selection effectiveness during the interview process is statistically significant ($p = .047 < .05$).

Lastly, from the model the coefficient for personality is .475. It means that a 100% increase in Aptitude Testing, effective selection will increase by about 48%. Therefore Aptitude Testing had a significant positive effect on Employee Selection. An increase in effectiveness of aptitude testing strategies and policies results in an increase in effective selection of employees in KPS.

Table 4.12: Regression Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.617^a	.380	.339	.660

Dependent Variable: Selection; Predictors: (Constant), Personality, Aptitude & Intelligence Tests

Source: Researcher's Data, 2017

The Model Summary presents the Multiple Correlation Coefficient R value of .617. This is the correlation between the set of the three Psychological Tests and Selection. The result shows that the correlation is moderately strong. The R square value of 0.38 is the coefficient of determination. It implies that the three predictor variables of selection accounts for about 38% of variations in effectiveness of employee selection of Kenya Prisons Service. The other percentage (62%) is accounted for by other variable except the ones in the model. This implies that effective selection depends not only on Psychological Tests, but also other factors. Thus calls for further investigation of these factors to be included in the model to increase predictive power of effective selection.

4.6 Discussion of Findings

This study sought to identify the effect of Psychological Testing on the selection process of employees in the Kenya Prisons Service. The study presented the following findings;

4.6.1 Aptitude Test

The results of this study indicated that most respondents appreciated the significant effect of Aptitude Tests on employee selection process. With a Mean of 3.36, the respondents moderately agreed that Aptitude Tests had an effect on Employee Selection process in Kenya Prisons Service.

Correlation Analysis results revealed that Aptitude Tests and Quality of Selection Process are positively and significantly correlated ($r = .394$, $p = .005$). The first hypothesis, HO1 was thus rejected since the p-value $< .05$ and this concluded that there is a significant relationship between Aptitude Tests and employee selection. This

implies that employee selection process that is based on the rigorous Aptitude Testing would result in getting effective employees.

Finally, from Coefficient Model for personality presented a Coefficient of .475. It means that a 100% increase in Aptitude Testing, effective selection would increase by about 48% implying that Aptitude Testing had a significant positive effect on Employee Selection. An increase in effectiveness of aptitude testing strategies and policies results in an increase in effective selection of employees in Kenya Prisons Service.

These findings are supported by studies by Susanne Jaeggi et al. (2008), which stated that candidates who score well on employment aptitude tests are more likely to successfully complete training, better equipped to adapt and evolve and learn new skills in fast-changing work environments, and tend to be better decision-makers. Studies on aptitude testing and employee suitability revealed that aptitude tests are twice as predictive as job interviews, three times as predictive as experience, and four times as predictive as education level, Higgins and Sun (2002). Aptitude Testing allows to identify a number of abilities within individuals which can determine how to place them on the job.

4.6.2 Intelligence Test

This study found that there was moderate application of Intelligence Test during employee selection process in Kenya Prisons Service. The results further of the study indicated that the employees acknowledged that there was significant effect of Intelligence Tests on employee selection process.

With a Mean of 3.25, the study presented a moderate effect of Intelligence Tests on Employee Selection in Kenya Prisons Service.

Further, Intelligence Tests and Quality of Selection Process as presented by the Correlation Analysis results, are positively and significantly correlated ($r = .468$, $p < .001$). In this regard, the H02 that there is no significant relationship between Intelligence Test and Employee Selection in Kenya Prisons Service was rejected. Thus it is concluded that there is a significant relationship. Therefore the more intensive the application of Intelligence Test, the more effective the Selection Process.

The regression coefficient for Intelligence Testing during interview process was 0.556. This means that, if Aptitude and Personality Testing initiatives were held constant, a 100% increase in Intelligence Testing during interview process, results in about 56% increases in effectiveness of employee selection at Kenya Prisons Department. The contribution of Intelligence Testing to selection effectiveness during the interview process is statistically significant, ($p = .047 < .05$). Intelligence Tests, thus has a positive effect on the process of employee selection process.

According to Minsky, (2016). People with higher levels of Intelligence have the ability to process information properly and accurately, record higher performance and tend to respond better to training hence, Intelligence tests generalize across organizations and jobs and have been shown to produce large economic gains for companies that use them. Caruso, & Mayer, (2015), established that effective employee selection based on an applicant's Emotional Intelligence is one of the most important factor which result to quality of selection and hence a higher level of job performance. Closely related studies by Slaski & Cartwright, (2012), observed that effective intelligence screening during interview and management performance of employees in the actual workplace has a significant positive relationship.

4.6.3 Personality Test.

The findings of this study indicated that the employees acknowledged the significance of Personality Tests on matching the right candidate to the task applied for. With a Mean of 3.44, the study indicated that there was a moderate effect of Intelligence Tests on Employee Selection in Kenya Prisons Service.

Lastly, from the model the coefficient for personality is .475. It means that a 100% increase in Aptitude Testing, effective selection will increase by about 48%. Therefore Aptitude Testing had a significant positive effect on Employee Selection. An increase in effectiveness of aptitude testing strategies and policies results in an increase in effective selection of employees in in Kenya Prisons Service.

The link between Personality and Emotional Intelligence to job performance is compelling, Duckworth, et al, (2014). Though there is strong evidence that cognitive measurement tools are good predictors of job success, one important reason which makes them not to be perfect predictors is that human personality is an important factor in job success.

Similarly, findings indicates that personality Test and effective employee selection are positively and significantly correlated ($r = .481, p < .000$). For that reason the H03 that there is no significant relationship between intelligence test and employee selection in KPS was rejected. Thus it is conclude that there is a significant relationship. This indicates that intensive use of personality test during interview process of candidates, results in effective selection. The positive effect is plausible based on the view that personality has a significant role to play in deciding whether a potential employee has the enthusiasm and motivation that the employer is looking for. It can also be argued that personality determines how well an employee fit in to the organization, in terms of

personality, attitude and general work style. In most working situations it's the personalities of the people involved that affect the day-to-day success of the institution.

4.6.4 Employee Selection

These results of this study indicated that the use of psychological Tests in the employee selection improves the effectiveness of the selection process. The regression model presented a Coefficient of 7.19, indicating that application of Psychological Tests had an effectiveness rate of over than 70% and so these tests are significant in the process of employee selection in Kenya Prisons Service.

From the Correlation Analysis results revealed that Aptitude Tests and Quality of Selection Process were positively and significantly correlated, ($r = .394$, $p = .005$). Intelligence Tests and Quality of Selection Process as presented by the Correlation Analysis results, were positively and significantly correlated ($r = .468$, $p < .001$). Similarly, Personality Test and Quality of Selection Process as presented by the Correlation Analysis results, were positively and significantly correlated ($r = .481$, $p < .000$). This means that all the three null hypotheses H01, H02 and H03 were rejected, implying a significant relationship Psychological Tests and employee selection process.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMENDATIONS

5.0 Introduction

This last chapter has presented the summary of the findings, the conclusions made and recommendations. It has also suggested areas for any further study.

5.1 Summary

The study was aimed at finding out the effect of Psychological Testing in the selection of Professional Employees in the Kenya Prisons Service. An exploratory research design was used in this study. Data was collected from 108 professional employees who formed the unit of analysis for the study. The literature reviewed centred on concepts in psychological testing and employee selection. From the review, a conceptual framework was developed linking these psychological tests and selection. The psychological variables investigated were; the Aptitude Test, Intelligence Test Personality Test and Selection process.

Aptitude Test, Intelligence Test and Personality Test have a positive effect on the quality and effectiveness of employee selection process in Kenya Prisons Service. Thus applying the tests was associated with selecting suitable employees for the Kenya Prisons Service; suitable in the sense that their skills, personal traits, intellect and emotional development are aligned to the job requirement. Each of three Psychological Tests contributes positively to effectiveness in employee selection. As such they determine the variation in effectiveness on employee selection.

5.2 Conclusions

From the findings of this study, the following are the conclusions on this study on the effect of Psychological Tests and Testing in the selection of Professional Cadre Employees in the Kenya Prisons Service.

5.2.1 Effect of Aptitude Tests on Employee Selection.

Aptitude Tests have a positive effect on the effectiveness of employee selection. There is a significant Positive Correlation between Aptitude Test and Quality of Employee Selection Process. An increase in effectiveness of Aptitude Testing strategies and policies will result in an increase in effective selection of employees in Kenya Prisons Service.

5.2.2 Effect of Intelligence Tests on Employee Selection.

Intelligence Tests have a positive effect on the effectiveness of employee selection. There is a significant Positive Correlation between Intelligence Tests and Quality of Employee Selection Process. Adequate application of Intelligence Testing strategies and policies will result to increased effectiveness selection of employees in Kenya Prisons Service.

5.2.3 Effect of Personality Tests on Employee Selection.

Personality Tests have a positive effect on effectiveness of employee selection. There is a significant Positive Correlation between Intelligence Tests and Quality of Employee Selection Process. Adequate application of Intelligence Testing strategies and policies will result to increased effectiveness selection of employees in Kenya Prisons Service.

5.2.4 Employee Selection in Kenya Prisons Service.

Psychological Tests have a positive effect on the quality and effectiveness of employee selection. There is a significant Positive Correlation between Psychological Tests and Quality of Employee Selection Process. Application of Psychological Tests, strategies and policies will result to enhanced effectiveness of selection of employees in Kenya Prisons Service.

5.3 Recommendations

From the findings of this study on the Psychological Testing in the Selection Process of Professional Employees in Prison Institutions in Mombasa County, the researcher presents the following recommendations;

1. Aptitude Tests should be adopted in employee selection of not only professional employees but also non-professional employees in Kenya Prisons Service.
2. Intelligence Tests should be adopted in the selection of all employees of Kenya Prisons Service.
3. Personality Tests should be adequately used in the selection of all employees of Kenya Prisons Service.
4. The Management of Kenya Prisons Service should develop employee recruitment and selection policies that incorporate use of Psychological Testing.
5. There is need to develop recruitment and selection framework that incorporates both psychological tests and other attributes. This will enable the organization to get the most effective employees for high organizational and individual productivity. By so doing, there are reduced costs associated with mismatched employee talents and job requirement.

5.4 Areas for Further Studies

Some of the areas for further studies for this research include;

Psychological Testing as a determining factor in employee placement and deployment on various jobs in an organization.

A comparative study on employee performance based employees selected through Psychological Testing and those selected without Psychological Testing.

The effects of Personality Testing on suitability for candidates selected training after Training Needs Analysis process.

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APPENDICES

Appendix I: Letter Of Introduction From Moi University



MOI UNIVERSITY
SCHOOL OF HUMAN RESOURCE DEVELOPMENT
DEAN'S OFFICE

P.O. Box 3900
 ELDORET
 KENYA.

Tel./Fax 254-053-43153/43620 Ext.434

REF: MU/SHRD/PG/77

29th September, 2017

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: MUMAINA, PAUL WALUBA: SHRD/PGH/01/15

This is to confirm that the above named is a Master of Science Student in the Department of Development Studies, School of Human Resource Development taking M.Sc Course in Human Resource Development.

He has successfully finished his coursework, submitted his Thesis proposal for examination entitled *"The Psychological Tests and Testing in the Process of Employee Selection in Prisons Institutions in Mombasa County"* and he has been cleared to proceed to the field to collect data.

Any assistance accorded to him will be highly appreciated.

Yours faithfully,


PROF. RUTH J. TUBEY
DEAN, SCHOOL OF HUMAN RESOURCE DEVELOPMENT

/mc

Appendix II: Letter of Introduction to Kenya Prisons Service

Paul Mumaina Waluba
Moi University, Coast Campus,
P. O. Box 37935 – 80100.

MOMBASA.

Date: 29th November, 2017.

The Regional Commander of Prisons,
Coast Region,
P.O. Box 80704 – 80100.

MOMBASA.

RE: PERMISSION TO CARRY OUT A RESEARCH STUDY IN YOUR INSTITUTIONS.

I am a student at Moi University undertaking a Management Course leading to a Master of Science Degree in Human Resource Development. It is a requirement by the University for all students as part of their curriculum to carry out a Research Study and write a report on their findings. As a Human Resource Development student, I have been enthusiastic to understand the process of employee selection during recruitment of personnel at the Kenya Prisons Service a reason that compelled me to go for your institutions as cases for my study.


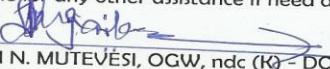

The study is about; “Psychological Tests and Testing in the Selection of Professional Employees in Prisons Institutions in Mombasa County”. The researcher will be administering a questionnaire and conducting interviews to collect data for the study. I would like to inform you that this study is purely meant for academic purpose hence the information collected shall be treated with the highest level of confidentiality and shall not be used anywhere other than for the academic purpose already stated above. I shall be grateful if my humble request shall be accorded consideration by your good office.

Yours Faithfully,



Paul Mumaina Waluba
Cell phone: +254 723 154 049
E-mail: mpwaluba110@gmail.com

**Appendix III: Permission Letter from the Kenya Prisons Service – Mombasa
County**

<p>OFFICE OF THE PRESIDENT MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT KENYA PRISONS SERVICE</p>		
<p>Telegrams: "rcprisons", Mombasa Telephone: Mombasa 0770941995 Fax: 0202689650 E-mail: rcpcoast@gmail.com When replying please quote:</p>		<p>REGIONAL PRISONS COMMANDER, COAST REGION, P.O. BOX 80704 - 80100, MOMBASA.</p>
<p>Ref: RPC/CR/ADM/1/VOL. XXXV/35</p>	<p>Date: 1ST DECEMBER, 2017</p>	
<p>Paul Mumaina Waluba Moi University, Coast Campus, P. O. Box 37935 – 80100. MOMBASA.</p>		
<p><u>PERMISSION TO CARRY OUT A RESEARCH STUDY IN PENAL INSTITUTIONS WITHIN MOMBASA COUNTY.</u></p>		
<p>Reference is drawn to your unreferenced letter dated 29th November, 2017 on the above subject matter. Your request is hereby granted. You will be required to conduct your Research in the following Institutions; Shimo La Tewa Maximum Security Prison, Shimo La Tewa Medium Security Prison, Shimo La Tewa Women Prison, Shimo La Tewa Borstal Institution, Mombasa Remand Prison and the Regional Prisons Commander's Office - Coast. You are further informed that strict observation and adherence to the Prisons Rules and Regulations must be followed to the latter of which you must acquaint yourself forthwith.</p>		
<p>For Officers-In-Charge of the above respective stations and The Superintendent-In-Charge Shimo Borstal Institution, kindly accord the student any necessary support. Our Office will be readily available for any other assistance if need arises.</p>		
<p> JOSEPH N. MUTEVESI, OGW, ndc (K) - DCP REGIONAL PRISONS COMMANDER COAST REGION.</p>	<p> . The Regional Prisons Commander Coast Region P. O. Box 80704, Mombasa</p>	
<p>C.c:</p>		
<p>1. The Officer-In-Charge Shimo La Tewa Max. Security Prison P.O. Box 90152 – 80100 MOMBASA.</p>	<p>3. The Officer-In-Charge Shimo La Tewa Women Prison P.O. Box 90152 – 80100 MOMBASA.</p>	
<p>2. The Officer-In-Charge Shimo La Tewa Mdm. Security Prison P.O. Box 1079 – 80109 MTWAPA.</p>	<p>4. The Superintendent-In-Charge Shimo La Tewa Borstal Institution P.O. Box 90152 – 80100 MOMBASA.</p>	
<p>5. The Officer-In-Charge Mombasa Remand Prison P.O. Box 90152 – 80100 MOMBASA.</p>		
<p>MOTTO : Rehabilitation and Justice VISION : A Correctional Service of excellence in Africa and beyond MISSION: To contain offenders in humane safe conditions in order to facilitate responsive administration of Justice, Rehabilitation, Social Reintegration and Community Protection.</p>		

Appendix IV: Research Questionnaire

Introduction

This study is about; “Psychological Tests and Testing in the Selection of Professional Employees in the Kenya Prisons Service, focusing on Prisons Institutions in Mombasa County”. The researcher is administering this questionnaire to collect data for this study as an academic requirement for a course leading to a Master of Science Degree in Human Resource Development at Moi University. Kindly answer all the questions by ticking against the choices provided or filling in the spaces. For any clarification or queries please contact;

Paul Waluba Mumaina

Cell phone: +254 723 154 049

E-mail: mpwaluba110@gmail.com / paulreinards@hotmail.com

PART I: GENERAL INFORMATION;

Name of Respondent (Optional).....

Designation

Name of Institution

Shimo La Tewa Maximum Shimo La Tewa Women Mombasa

Remand

Shimo La Tewa Medium Shimo La Tewa B.I RPC's Office

Length of service in years

Less than one (1) year 1 - 5 years

6 - 10 years Above 10 years

Area / Section / Division of deployment.....

PART II:**1. EFFECT OF APTITUDE TESTS ON EMPLOYEE SELECTION PROCESS**

Please tick (√) the numerical value corresponding to your personal opinion for each statement.

Use the scale provided to guide your selection;

1 = Strongly Disagree

2 = Disagree

3 = Moderate

4 = Agree

5 = Strongly Agree

Effect Of Aptitude Tests On Employee Selection Process In The Kenya Prisons Service		1	2	3	4	5
a.	I underwent Aptitude Test during my selection into Prisons Service					
b.	I am quite aware of what Aptitude Tests entails					
c.	Aptitude Test are intensively and rigorously conducted during selection of employees into Kenya Prisons Service					
d.	Aptitude Tests results in matching the right candidate to the task applied for					
e.	Aptitude Test are critical to the quality of employee as the interview Itself					
f.	There is a standard Aptitude Questionnaire used during selection					

2. EFFECT OF INTELLIGENCE TESTS ON EMPLOYEE SELECTION PROCESS.

Please tick (√) the numerical value corresponding to your personal opinion for each statement.

Use the scale provided to guide your selection;

1 = Strongly Disagree

2 = Disagree

3 = Moderate

4 = Agree

5 = Strongly Agree

Effect of Intelligence Tests on Employee Selection Process In The Kenya Prisons Service		1	2	3	4	5
a.	I underwent a comprehensive Intelligence Tests during my selection into the Prisons Service					

b.	Intelligence Tests are adequately applied during recruitment and selection of employees here					
c.	Intelligence Tests are intensively and rigorously conducted during selection of employee here					
d.	Intelligence Tests result in matching the right candidate to the task applied for					
e.	Intelligence Tests are critical as the interview itself					
f.	There is a standard Intelligence questionnaire used during selection					

3. PERSONALITY TESTS AND THE EMPLOYEE SELECTION PROCESS.

Please tick (√) the numerical value corresponding to your personal opinion for each statement.

Use the scale provided to guide your selection;

1 = Strongly Disagree

2 = Disagree

3 = Moderate

4 = Agree

5 = Strongly Agree

Personality Tests And The Employee Selection Process in the Kenya Prisons Service		1	2	3	4	5
a.	I underwent a comprehensive Personality Tests during recruitment process					
b.	Personality Tests are adequately applied during recruitment of employees here					
c.	Personality Tests are intensively and rigorously conducted during selection of employee here					
d.	Personality Tests results in matching the right candidate to the task applied for					
e.	Personality Tests are critical as the interview itself					
f.	There is a Standard Personality questionnaire used during selection					

PART III: EMPLOYEE SELECTION IN KENYA PRISONS SERVICE

Please tick (√) the numerical value corresponding to your personal opinion for each statement.

Use the scale provided to guide your selection;

1 = Strongly Disagree

2 = Disagree

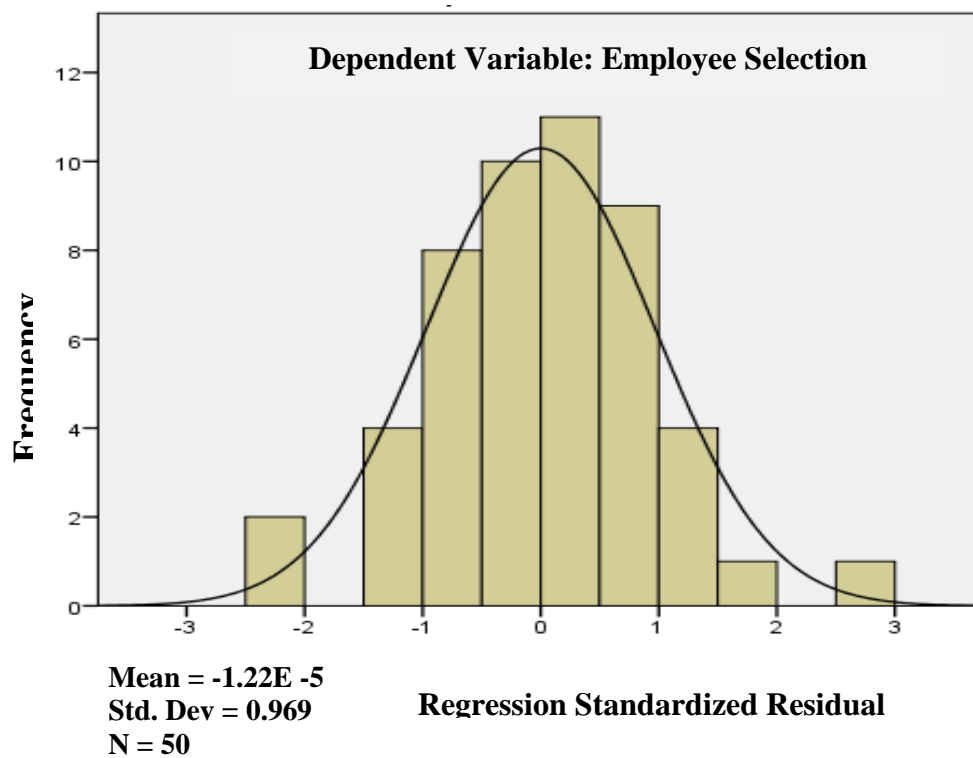
3 = Moderate

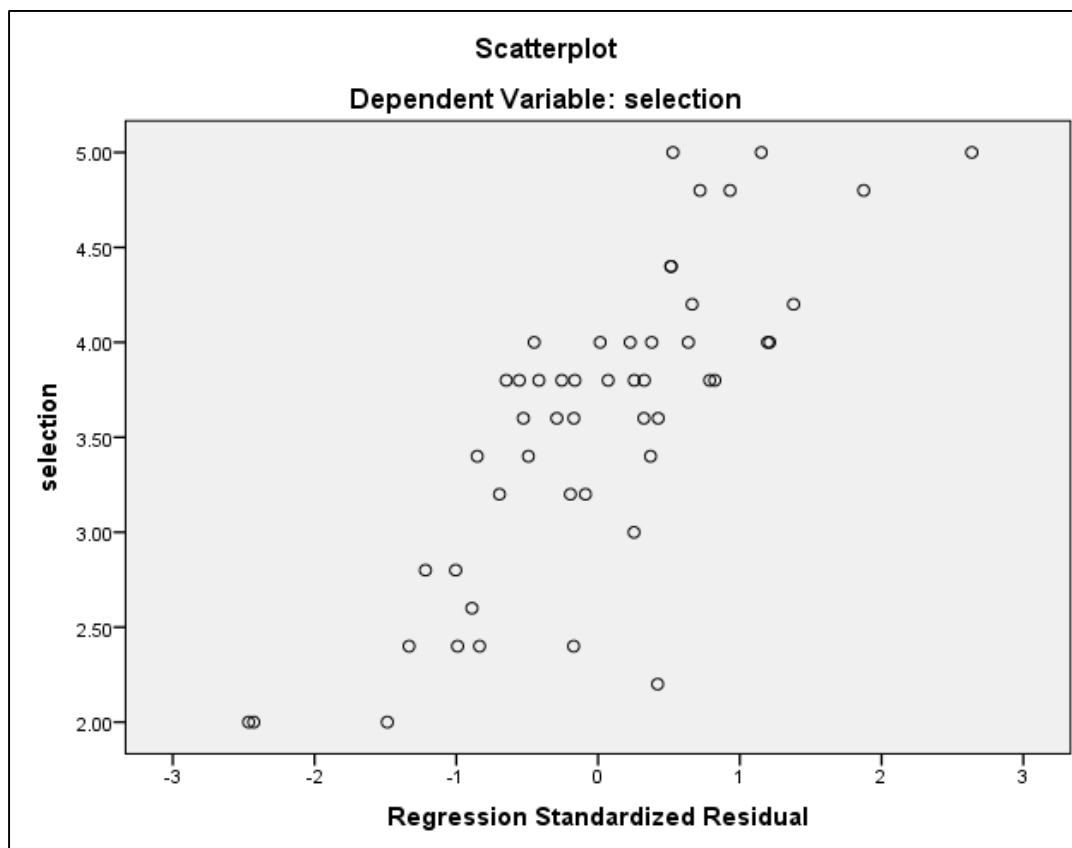
4 = Agree

5 = Strongly Agree

Employee Selection In Kenya Prisons Service		1	2	3	4	5
a.	Employees selected match the required job skills					
b.	Employees selected are psychologically prepared for the task					
c.	Effective Selection Process is critical in acquiring the needed job skills					
d.	Am satisfied by the Selection Process I underwent					
e.	The Selection Process reflects the changing circumstances					

END OF QUESTIONNAIRE

Appendix V: Histogram – Test of Normality

Appendix VI: Scatter Plot For Test Of Linearity

Appendix VII: Authorization Letter from NACOSTI



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: 020 400 7000,
0713 788787,0735404245
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/17/44615/20405**

Date: **4th December, 2017**

Paul Mumaina Waluba
Moi University
P.O. Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“The psychological tests and testing in the process of employee selection in prisons institutions in Mombasa County,”* I am pleased to inform you that you have been authorized to undertake research in **Mombasa County** for the period ending **4th December, 2018.**

You are advised to report to **the County Commissioner and the County Director of Education, Mombasa County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

G.P. Kalerwa

**GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner
Mombasa County.

The County Director of Education
Mombasa County.

Appendix VIII: Authority From the County Commissioner's Office



THE PRESIDENCY
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Telephone: Mombasa 2311201
 Tel. 0715 040444

COUNTY COMMISSIONER'S OFFICE
 P.O. BOX 90424-80100
MOMBASA

Email: msacountycommissioner@yahoo.com
 When Replying please quote:

Ref. no. **MCC/ADM.25 VOL.1/84**

13th December, 2017

Deputy County Commissioner
KISAUNI SUB-COUNTY

Deputy County Commissioner
MOMBASA SUB-COUNTY

RE: RESEARCH AUTHORIZATION – PAUL MUMAINA WALUBA
PERMIT NO. NACOSTI/P/17/44615/20405

This is to authorize the above named student from Moi University, Eldoret to carry out research on "The psychological tests and testing in the process of employee selection in prisons institutions in Mombasa County" for a period ending 4th December, 2018.

Any assistance accorded to him will be highly appreciated.

ESTHER I. TSUMA
FOR: COUNTY COMMISSIONER
MOMBASA COUNTY

C.C.

County Director of Education
MOMBASA

Appendix IX: Authorization from the County Director of Education



**REPUBLIC OF KENYA
MINISTRY OF EDUCATION
STATE DEPARTMENT OF BASIC EDUCATION**

Telegrams: "SCHOOLING",
Mombasa
Telephone: Mombasa 2315327 / 2230052
When replying please quote

COUNTY DIRECTOR OF EDUCATION,
P. O. BOX 90204 – 80100,
MOMBASA.

Ref. MC/ED/GEN/23/5

13th December, 2017

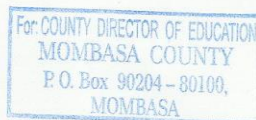
TO WHOM IT MAY CONCERN

RESEARCH AUTHORIZATION

PAUL MUMAINA WALUBA

This is to authorize Mr. Paul Mumaina Waluba – NACOSTI/P/17/44615/20405 from Moi University to carry out research on ***"The psychological tests and testing in the process of employee selection in prisons institutions in Mombasa County"*** for the period ending 4th December, 2018.

Please give him the necessary assistance.



B.W. NJOROGE
FOR: COUNTY DIRECTOR OF EDUCATION
MOMBASA