

# CHAPTER ONE

## INTRODUCTION

### **Background to the Study**

Crime is a universal phenomenon and differs only in degree among the various nations of the world. In Nigeria, criminal activities are multidimensional and have been undermining its corporate existence as well as efforts towards sustainable development (Tanimu, 2006).

The concentration of violent crimes in major urban centres worldwide is viewed as an indicator of the breakdown of urban systems. In many urban centres of Nigeria, criminal activities and violence are assuming dangerous proportion as they threaten lives and property, national sense of well-being and coherence, peace and social order: thus, reducing citizens' quality of life (Agboola, 2009; Ahmed, 2010).

Over the years, the rate of crime in Nigeria has been on the increase and these crimes are being carried out with more digital sophistication. This has led to the formation of various vigilante groups, to combat crimes in some parts of the country (Fajamirokun, Adewale, Idowu, Oyewusi, & Maiyegun, 2006). Notwithstanding the presence of such groups, crime has significantly contributed to underdevelopment of the country through loss of human capital and other factors of production. Aside from the human and sociological effect, it is also

believed that it is a major reason for poor direct investment by foreign entrepreneurs. Reduction of both frequency, magnitude, and types thus become a primary national and research concern.

When a person is accused of committing an offence, the law provides that the person is yet called a suspect and may be detained until trial and adjudication is made (S.33 [5] of the 1999 constitution). It is conceivable that these persons (at least most of them) are still very much in touch with society and can give reliable account of their interactions. The researcher believes that this population will provide valid information on the possible relationship among the variables of personality, general health and criminality. This is in the understanding that the key to good understanding of criminal behaviour is focused, and analyzes of fundamental attributes of all humans, rather than specific criminal acts.

Criminal behaviour or criminality is a style of behaviour characterized by self-centeredness, indifference to the suffering and needs of others and low self-control (Gottfredson&Hirshi, 1990). In ordinary language, the term 'crime' represents an unlawful act that is punishable by the state. Crime is an act that violates the law of the society or serious offence against the law of the society for society for which there is a severe punishment by law (Tanimu, 2006). It is any action or omission prohibited by law and punished by the state and a deviant behaviour that violates prevailing norms, which may be cultural, social, political, psychological and economic conditions. Earlier, Okonkwo (1980) opined that it is

an act or omission which renders the person doing the act or making the omission liable to punishment. Indeed, the term in modern criminal law has no simple or universally accepted definition, however the statutory definitions have provided the most popular view, that crime is a category created by law. In other words an act is a crime if declared as such by the relevant and applicable law.

To best summarize a wide variety of criminal behaviour, a typology or classification system was proposed by an earlier researcher (Glaser, 1967), thus: Predatory crimes, these are the majority of crimes that are considered most severe by the general public and have serious negative sanctions. Predatory crimes were divided into crime against persons, crimes against property, and white collar crime. Crimes against persons and property have clearly chosen victims where property was taken or the victim was assaulted. White collar crimes refer more to behaviours such as forgery, embezzlement, and over invoicing.

The second category was illegal service crimes. These are crimes that do not appear to have a specific victim, yet they involve some sort of relationship between the criminal and others who may be considered “customers.” Examples are prostitution, drug crimes, or gambling. The third category was public disorder crimes, these also lack specific target victims, yet they are considered as crimes when others are offended or are likely to be offended. Drunkenness, disorderly conduct, and vagrancy are key examples. The fourth and final category is

negligence offences, in which there is an unintended victim. Such crimes as over-speeding and other driving violations are prime examples.

One of the factors that can correlate with crime is psychological health status, which refers to a state of wellbeing in which a person can use his or her own abilities and cope with the normal stresses of life. It is a measure of mental health which is described as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (World Health Organization, 2005). This follows that Psychological Health is not just the absence of mental illness (Bos, Snippe, de Jonge, & Jeronimus, 2016).

Wikipedia Dictionary (2010) explains the meaning of psychological health as a state of emotional and psychological well-being in which an individual is able to use his or her cognitive and emotional capabilities, function in society and meet the ordinary demands of everyday life. It is the interaction of balance-strike among biological, psychological, social, and spiritual patterns of human existence. In their different approaches to explaining psychological health, most researchers believe that psychological health concerns the physical, social and psychological states (Vaillant, 2012).

Psychological health is an important determinant of one's integrated personality and balanced behaviour identified on the basis of the level of his/her adjustment to self, others and environment. However, Goldberg explains psychological health

status to include four dimensions, which are: physical symptoms, anxiety and sleeplessness, social function disorder and depression.

Psychologists sometimes use the term psychological health interchangeably with mental well-being (Josefsson, Cloninger, Hintsanen, Jokela, Pulkki-Råback, & Keltikangas-Järvinen, 2011), “subjective well-being” or “happiness” (Lucas & Diener, 2008; Rosenthal & Hooley, 2010), “Psychological well-being” or “eudaimonia” (Cloninger & Zohar 2011; Wood, Joseph, & Maltby, 2011) “mental hygiene” (Barenbaum & Winter, 2008) and “psychological wealth” (Diener & Biswas-Diener, 2008). In using these terms, some of these scholars argue that psychological health or whatever term that is used to reference it, cannot be considered separately, and in order to have a better understanding of psychological health, its major components such as physical, mental, and spiritual well-being should be considered together (Cloninger & Zohar, 2011).

Another factor that can correlate with crime is personality may be best described as the dynamic and organized set of characteristics including cognitions, emotions, motivations, and behaviours displayed in various situations. It is the unique and variable patterns of human behaviours, focusing on sensing, thinking, and feelings (Obi, Nwankwo, Agu, Aboh, & Agbor, 2013). According to Robert (2009) personality is the relatively enduring patterns of thoughts, feelings, and behaviors that reflect the tendency to respond in certain ways under certain

circumstances. Schacter, Gilbert, & Wegner (2009) assert that personality is an individual's characteristic style of behaving, thinking, and feeling".

Furthermore, Obi, Nwankwo, Agu, Aboh, and Agbor, (2013) states that the personality of the individual is the settled framework of references within which a person addresses issues and decides how to behave. These authors went ahead to argue that the concept of personality is a comprehensive, all embracing concept and the total pattern of characteristic ways of thinking, feeling, and behaving that constitute the individual's distinctive method of relating to the environment. Hence, personality is the sum total of psychological characteristics of a person that are enduring as well as unique.

In an attempt to explain personality, many scholars such as Eysenck(1964) emerged, with the claim that certain numbers of personality traits are enough to conceptualize human personality. McCrae and John (1991) asserted that breaking personality into diverse but related components called the Big Five, will help the understanding of human personality. These include: openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism (or emotionality). These components are generally stable over time, and about half of the variance appears to be attributable to a person's genetics rather than the effects of one's environment (Briley, &Tucker-Drob, 2014) and are adopted to guide the present study.

Studies on personality and its relatedness to other human structure have led to two major themes, which have pervaded nearly all efforts at domain of personality theorizing: human nature and individual differences (Buss, 2008). It is plausible therefore to state that the way one thinks, feels and behaves and one's unique individuality has significant contribution in other aspects of human functioning such as mental health or psychopathology. Indeed, some individuals are more prone to mental illness and psychopathology because of their characteristics and personality traits (Hampson& Friedman, 2008).

Psychologists have opined that criminal behavior must be explained by personality dimensions. This however has always been given great attention by personality theorists. According to literature, both classical and recent research show that some individuals are crime prone, that is, they have certain specific personality features which cause them to involve in illegal activities (Hampson& Kline, 1977). Empirically, while many researchers have compared the offenders and non- offenders on a number of psychological factors; most of the researchers have specifically compared offenders and non-offenders on the four dimensions of personality given by Eysenck. Almost all the studies showed that offenders scored higher on psychoticism, neuroticism, extraversion and lie as compared to non-offenders (Ardalan, Irvani, &Sobhi-Gharamaleki, 2010; Dunlop, Morrison, Koenig &Silcox, 2010; Corf&Toupin, 2009). Also, Monahan, Laurance, Elizabeth

and Edward, (2009) compared the inmates with non-inmates and concluded that both differ in their personalities.

Possibly, it could be deduced from studies that researchers have tried to compare offenders and non-offenders on their personality structure/characteristics. Surprisingly though, none of these studies to the best of the researcher's knowledge has tried to look at the comparison between the personality structure of suspects and non-suspects, and psychological health. This however makes the present study very imperative.

### **Statement of the Problem**

World over, criminal behaviour is a major constraint to societal development. Newspaper and other media reports have highlighted crime activities that occur almost on a daily basis. Law enforcement agencies have been on alert and laws are being strengthened to deter criminals, yet it seems that not much has been achieved. Lives and properties are still being lost and various levels of trauma inflicted on the citizenry. It seems obvious that understanding the factors that motivate criminal behaviour or predispose humans to such acts is the panacea for a holistic and probably more effective crime control model. Indeed, researchers have for some time now focused on searching for such relationships, for instance Chapman, Lyness, and Duberstein, (2007); Martin et al., (2002) researched on personality and criminal behaviour.

However, much of such research are western based and samples were taken from general population and convicted criminals in prisons. The present researcher is convinced that studying “crime suspects” will offer significant information that will expand the frontiers of knowledge in this matter. Again, studies of psychological health as possible precursors of crime are very scarce, yet one of the major functions of forensic psychologists is the evaluation of mental/psychological health status of offenders. To close these lacunae and improve on existing literature on crime generally, and factors that may predispose to it, this study on personality and general health status becomes rather apt. Accordingly, the following research questions are raised:

- i. Will personality traits correlate with domains of psychological health among crimesuspects and non-suspects in Anambra State?
- ii. Will personality traits differ among the studied population in Anambra State?
- iii. Will psychological health differ among the studied population in Anambra State?

### **Purpose of the Study**

The main purpose of this study is to make a comparison of personality and psychological health between crime suspects and non-suspects in Anambra State.

Specifically, the study seeks to find out if:

- i. Personality traits will correlate with domains of psychological health among crime suspects and non-suspects in Anambra State.

- ii. Personality traits will differ significantly between crime suspects and non-suspects in Anambra State.
- iii. Psychological health will differ significantly between crime suspects and non-suspects in Anambra State.

## **Operational Definition of Key Variables**

**Personality**– This refers to the enduring personal characteristics that describe an individual's behaviour across range of situations as measured by the Big Five Inventory by John, Donahue and Kentle (1991), validated by Umeh (2004). The dimensions include:

**Openness to Experience** – This refers to such personality attributes as creative, sensitive, curious, cultivated and independent personality.

**Extraversion** –This refers to the degree to which an individual is social, active, talkative, outgoing and assertive with other.

**Agreeableness** –This refers to the degree to which an individual is cooperative, helpful, courteous, and supportive to others.

**Conscientiousness** – This refers to the degree to which an individual is responsible, disciplined, organized and goal achieving.

**Neuroticism** –This refers to the degree to which a person is nervous, stressed, unstable, unconfident, doubtful, and uncertain.

**Psychological Health** – This refers to a state of wellbeing in which a person can use his or her own abilities to cope with the normal stresses of life. The

domains include: anxiety/depression and social dysfunction as measured in the General Health Questionnaire (GHQ-12) by Goldberg and Williams (1988), validated by Goldberg and Williams (1988).

**Criminal Suspects** – These are people that are suspects of criminal offences.

**Non-Suspects** – These are people who were not arrested or remanded for any criminal charge, and in this study, they were drawn from Part-time students of the Faculty of Social Sciences, NnamdiAzikiwe University, Awka.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

This chapter presents the review of both theoretical and supporting empirical literature related to the variables of interest: a) Personality and General Health.

## **Personality**

The word "personality" originates from the Latin *persona*, which means mask. It is often referred to as a multidimensional concept, involving patterns that influence behavior, thought, motivation, and emotion in a human being. It references a dynamic and organized set of characteristics possessed by a person that uniquely influences his/her environment, cognitions, emotions, motivations, and other aspects of behaviour in various situations. Personality also captures the combination of behavior, emotion, motivation, and thought patterns that define an individual. According to Engler, (2009), personality refers to the pattern of thoughts, feelings, social adjustments, and behaviors consistently exhibited over time that strongly influences one's expectations, self-perceptions, values, and attitudes. It also predicts human reactions to other people, problems, and stress. In addition to this, Hannah, and Akmal, (2016) postulate that personality encompasses all of the thoughts, behavior patterns, and social attitudes that impact how humans view themselves and what they believe about others and the world around them. Understanding personality allows psychologists to predict how people will respond in certain situations and the sorts of things they prefer and value. While Roberts (2009), stated that personality traits are the relatively enduring patterns of thoughts, feelings, and behaviors that reflect the tendency to

respond in certain ways under certain circumstances; Almlund, Duckworth, and Heckman (2011) in their contribution added that personality is a response function that maps personality traits to measured (manifest) personality. It could be deduced from the foregoing that personality is that differences in individual characteristic patterns of thinking, feeling and behaving.

Broadly, personality has been conceptualized from a variety of theoretical perspectives, and at various levels of abstraction or breadth (John, Hampson, & Goldberg, 1991; McAdams, 1995). Each of these levels has made unique contributions to the understanding of individual differences in behavior and experience. Amongst the very many conceptualizations of personality are: Eysenck's (1987) three dimensions of neuroticism, extraversion, and psychoticism; Harkness and McNulty's five factors of positive emotionality / extraversion, aggressiveness, constraint, negative emotionality / neuroticism, and psychoticism (Harkness, McNulty, & Ben-Porath, 1995), Tellegen's (1982) three dimensions of negative affectivity, positive affectivity, and constraint; Millon's six polarities of self, other, active, passive pleasure, and pain (Millon, et al., 1996), the interpersonal circumplex dimensions of agency and communion (Pincus & Gurtman, 2006), Zuckerman's (2002) five dimensions of sociability, activity, aggression hostility, impulsive sensation seeking, and neuroticism-anxiety, Cloninger's (2000) seven factors of novelty seeking, harm avoidance, reward dependence, persistence, self-directedness, cooperativeness, and self-

transcendence; and the Five Factor Model (Big Five) dimensions of neuroticism, extraversion, openness, conscientiousness, and agreeableness (Costa & McCrae, 1990).

The ‘Big-Five Framework’, is a hierarchical model of personality traits with five broad factors, believed to represent personality at the broadest level of abstraction. Each bipolar factor (e.g., Extraversion vs. Introversion) summarizes several more specific facets (e.g., Sociability), which, in turn, subsume a large number of even more specific traits (e.g., talkative, outgoing). The Big-Five framework suggests that most individual differences in human personality can be classified into five broad, empirically derived domains.

Several researchers leaned on the Five Factor Model (FFM), as a dominant one in personality psychology (Aboaja, Duggan, & Park, 2011; Garcia, 2011; Jovanovic, 2011), and agree that individual differences in personality are captured by the dimensions of the Five Factor Model or Big Five Taxonomy (Hapmson, 2012). Much of what psychologists mean by the term “personality” is summarized by the FFM, and the model has been of great utility to the field by integrating and systematizing diverse conceptions and measures (McCrae & Costa, 2008). Additionally, each of the DSM-IV-TR personality disorders can, in fact, be readily understood as a maladaptive or extreme variant of the domains and facets of the FFM (Widiger&Trull, 2007; Aboaja, Duggan, & Park, 2011). Therefore, an

investigation of Big Five model scales and subscales would have useful outcomes in considering personality traits in criminal behaviour.

FFM involves some assumptions about human nature and about what people are like. Noting these assumptions, illustrate the natural functioning of individuals and helps in discriminating how normal functioning is. The five personality factors of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness form the substantive nucleus of FFM. According to McCrae & Costa (2008) each of these factors are related to some characteristic adaptations which has the capacity to trigger criminal behaviour. They are characteristic because they reflect the enduring psychological being of the individual, and they are adaptations because they help.

Neuroticism (a tendency to experience dysphoric affect, sadness, hopelessness, and guilt), is related to Low self-esteem, irrational perfectionistic beliefs, and pessimistic attitudes. Extraversion (a preference for companionship and social stimulation), is related to social skills, numerous friendships, enterprising vocational interests, participation in team sports, and club memberships. Openness to experience (a need for variety, novelty, and change) is related to interest in travel, many different hobbies, knowledge of foreign cuisine, diverse vocational interests, and friends who share tastes. Agreeableness (a willingness to defer to others during interpersonal conflict) is related to forgiving attitudes, belief in cooperation, inoffensive language, and reputation as a pushover.

Conscientiousness (strong sense of purpose and high aspiration levels) is related to leadership skills, long-term plans, organized support network, technical expertise (Aboaja, Duggan, & Park, 2011).

In sum, the five personality factors—Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness— form the substantive nucleus of the system; FFT traces their ramifications throughout the personality system. It also provides a framework within which to understand the development and operation of psychological mechanisms (such as need for association) and the behavior and experience of individual men and women. This model is adopted for the present study.

## **Theories of Personality**

### Trait Theories of Personality

According to the *Diagnostic and Statistical Manual* of the American Psychiatric Association (1994), personality traits are enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts. Theorists generally assume that a) traits are relatively stable over time, b) traits differ among individuals, and c) traits influence behavior. They are used in order to help define people as a whole. Traits are relatively constant; they do not usually change. Traits are also bipolar; they vary along a continuum between one extreme and the other, for example, friendly vs. unfriendly (Feist, Feist, & Gregory, 2009).

The most common models of traits incorporate three to five broad dimensions or factors. All trait theories incorporate at least two dimensions, extraversion and neuroticism, which historically featured in Hippocrates' humoral theory (*Aluja, García, & García, 2004*).

One of the famous contributors of trait theories is Gordon Allport. In his description of personality trait, he delineated different kinds of traits, which he also called dispositions. He referred to *Central traits* as basic to an individual's personality, while *secondary traits* are more peripheral. According to him, *Common traits* are those recognized within a culture and thus may vary from culture to culture. *Cardinal traits* are those by which an individual may be strongly recognized. In his book, *Personality: A Psychological Interpretation*, Gordon Allport (1937) both established personality psychology as a legitimate intellectual discipline and introduced the first of the modern trait theories (McAdams, 2009).

Another is Raymond Cattell, whose research propagated a two-tiered personality structure with sixteen "primary factors" (16 Personality Factors) and five "secondary factors." In Cattell's lengthy career, he had written 50 books, 500 journals papers, and 30 different types of standardized tests. For Cattell, personality itself was defined in terms of behavioral prediction. He described personality as *that which permits a prediction of what a person will do in a given situation*.

Another is John Gittinger's (1963) theory and its applications (the Personality Assessment System (PAS)). Specifically, he uses the Wechsler intelligence tests, which are well standardized and objective instruments rather than self-report tests. PAS factors out personality traits (primitivity) and two additional levels, Basic and Surface, which are adaptations by environmentally induced processes and learning. Gittinger's multivariate personality descriptions exceed 500 data-based outcome descriptions.

Another is Hans Eysenck, who believed that just three traits of extraversion, neuroticism and psychoticism were sufficient to describe human personality. However the differences between Cattell and Eysenck is based on preferences for different forms of factor analysis, with Cattell preferring oblique, Eysenck preferring orthogonal rotation to analyze the factors that emerged when personality questionnaires were subjected to statistical analysis.

Another contributor to the description of personality traits is Lewis Goldberg, who proposed a five-dimension personality model, nicknamed the "Big Five" (Alexander, Frey & Rebecca, 2009). They include: openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. He explained each of the dimensions thus:

1. *Openness to Experience*: the tendency to be imaginative, independent, and interested in variety vs. practical, conforming, and interested in routine.

2. *Conscientiousness*: the tendency to be organized, careful, and disciplined vs. disorganized, careless, and impulsive.
3. *Extraversion*: the tendency to be sociable, fun-loving, and affectionate vs. retiring, somber, and reserved.
4. *Agreeableness*: the tendency to be softhearted, trusting, and helpful vs. ruthless, suspicious, and uncooperative.
5. *Neuroticism*: the tendency to be anxious, insecure, and self-pitying vs. calm, secure, and self-satisfied(Santrock, 2008).

The Big Five contain important dimensions of personality. However, some personality researchers argue that this list of major traits is not exhaustive. Some support has been found for two additional factors: excellent/ordinary and evil/decent. However, no definitive conclusions have been established (Santrock, 2008).

Another is Ashton and Lee, who in 2008, proposed a six-dimensional HEXACO model of personality structure. The HEXACO personality traits/factors are: Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O). The three dimensions – Extraversion, Conscientiousness and Openness to Experience are considered to be basically the same as their counterpart dimensions in the Big Five Model. However, in the HEXACO model, Honesty-Humility, Emotionality and Agreeableness differ from the Neuroticism and Agreeableness factors of the Big

Five Model. Ashton and Lee especially emphasize the Honesty-Humility (H) factor as differentiating the HEXACO model from other personality frameworks. Specifically, the H factor is described as sincere, honest, faithful/loyal, modest/unassuming, fair-minded, *versus* sly, deceitful, greedy, pretentious, hypocritical, boastful and pompous. The H factor has been linked to criminal, materialistic, power-seeking and unethical tendencies (Ashton & Lee, 2008).

### **Criticism of Trait Theories**

Trait models have been criticized as being purely descriptive and offering little explanation of the underlying causes of personality. Eysenck's theory, however, proposes biological mechanisms as driving traits, and modern behavior genetics researchers have shown a clear genetic substrate to them. Another potential weakness of trait theories is that they may lead some people to accept oversimplified classifications or (worse still), offer advice based on a superficial analysis of personality. Again, trait models often underestimate the effect of specific situations on people's behavior.

### **Psychobiological Theory of Personality**

Cloninger, Svrakic, and Przybeck, (1993) developed the psychobiological model of personality which conceptualizes personality as an organization of dynamic and non-linear psychobiological processes. The authors developed age-appropriated instruments of the Temperament and Character Inventory (TCI), which measures temperament and character dimensions. Temperament refers to

individual differences in behavioral conditioning of responses to basic emotional stimuli related to fear, anger, disgust, and ambition. There are 4 TCI temperament dimensions: Novelty Seeking (NS) (i.e., impulsive vs. deliberate); Harm Avoidance (HA) (i.e., anxious vs. risk-taking); Reward Dependence (RD) (i.e., sociable vs. aloof), and Persistence (PS) (i.e., determined vs. easily discouraged). Each extreme of temperament has advantages and disadvantages depending on the situation (Cloninger et al., 1993; Cervone, 2005). Character refers to individual differences in higher order socio-cognitive processes (self-concepts, and intentional values and goals) (Cloninger, 2008a). The 3 dimensions of TCI character are called Self-Directedness (SD) (i.e., purposeful vs. aimless), Cooperativeness (CO) (i.e., helpful vs. hostile), and Self-Transcendence (ST) (i.e., holistic vs. self-centered) (Cloninger et al., 1993). Because Temperament refers to the tendency of responding to basic emotional stimuli, it is more strongly related to hedonic well-being (Cloninger, Bayon, & Svrakic, 1998). High levels of Extroversion of the Five-Factor Model (which corresponds to low scores of the HA 'Harm Avoidance' dimensions of the Temperament and Character Inventory 'TCI') tend to be more respondents to positive affect (Larsen & Eid, 2008). Also, high levels of Neuroticism (which corresponds to low persistence and low self-directedness) are associated to more reactivity to negative affect (Cloninger, 2010; Larsen & Eid, 2008). Character, on the other hand, refers to higher order

socio-cognitive self-regulatory processes, and is more associated to the Eudaimonic well-being (Cloninger, 2004).

## **Evolutionary Theory of Personality**

Charles Darwin is the founder of the theory of evolution of the species. The evolutionary approach to personality psychology is based on this theory (Darwin, 1991). On one hand, this theory examines how individual personality differences are based on natural selection. Through natural selection organisms change over time through adaptation and selection. Traits are developed and certain genes come into expression based on an organism's environment and how these traits aid in an organism's survival and reproduction; on the other hand, it holds that human has evolved “different-detecting mechanism” to perceive individual differences that are relevant to survival and reproduction (Buss, 1996).

Personality, according to Buss (1996), is an adaptive landscape where the Big Five traits represent the most salient and important dimensions of the individual's survival needs. The evolutionary theory lays emphasis on the person perception and individual difference. This perspective holds that because people differ systematically along certain trait dimension and because knowledge of other's traits has adaptive value, humans have evolved a capacity to perceive those individual differences that are central to the social landscape (Odoh, 2010).

Added to this theory is the notion of Polymorphisms, such as gender and blood-type, which are forms of diversity that evolve to benefit a species as a whole

(Ford, 1965). The theory of evolution has wide range implications on personality psychology. However, personality viewed through the lens of evolutionary psychology places a great deal of emphasis on specific traits that are most likely to aid in survival and reproduction, such as conscientiousness, sociability, emotional stability, and dominance (Kenrick, Sadalla, Groth, & Trost, 1990). The social aspects of personality would be seen through an evolutionary perspective also. Specific character traits develop and are selected because they play an important and complex role in the social hierarchy of organisms. Such characteristics of this social hierarchy include the sharing of important resources, family and mating interactions, and the harm or help organisms can bestow upon one another (Darwin, 1991).

The interconnection between Evolutionary theory of personality and criminality can however be used to explain in terms of the tenets of the theory, which places a great deal of emphasis on specific traits that are most likely to aid in survival and reproduction, such as conscientiousness, sociability, emotional stability, and dominance (Kenrick, Sadalla, Groth, & Trost, 1990). Since, some people who engage in crime claim that they do so to survive, one may not be wrong to opine that individuals high in any of the personality traits (especially dominance), may tend to be crime-prone, with the view to survival.

## **Personality and Crime**

Tenibiaje (2010) investigated the differences in the personality traits of prison inmates and non-inmates and development of crime. The study was carried out in Nigerian Prisons located in five states in southwestern Nigeria. The sample comprised of 200 subjects made up of 121 inmates and 79 non-inmates. The non-inmates were the students of University of Ado-Ekiti, Nigeria, public servants and nurses in Ekiti State, Nigeria, aged 17 to 45 years. A descriptive survey research design was adopted for the study. Eysenck Personality Questionnaire was used to collect information from the respondents. The result of the investigation showed that the inmates scored significantly high than the non-inmates in extroversion, neuroticism and psychoticism dimensions.

Khan (2014) compared the personality dimensions of suspects and non-suspects of Khyber Pukhtonkhwa (KPK), using the Eysenck personality Questionnaire which was administered on the sample of 400 (suspects = 200, non-suspects = 200). Suspects were the inmates in different jails of KPK while non-suspects were the students of different colleges of KPK. It was hypothesized that the suspects will score higher on all the four dimensions of Eysenck personality scale as compared to non-suspects. Findings of the study confirmed the said hypothesis. It was proved that suspects had higher scores of psychoticism, neuroticism, extraversion, and lie as compared to non-suspects.

Tenibiaje (2011) investigated the interactive effect of personality traits, sex and age among prison inmates in some Nigerian prisons. Five hundred and four prison

inmates were stratified and randomly selected from some prisons in South Western Nigeria. The researcher utilized the descriptive survey method, and the Eysenck Personality Questionnaire was the instrument. One research question and one null hypothesis were formulated and tested using two-way Analysis of Variance (2-WAY ANOVA) at probability level of 0.05. It was found that there was a significant interaction between personality traits, sex and age on criminal behaviour of inmates.

Fuller (2012) studied the relationship between personality factors and offending. The personality factors included in the study were Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (OCEAN). It was hypothesized that OCEAN would significantly impact offending and co-offending among an adult sample of college students. Also, an effort was made to show that OCEAN could significantly differentiate between individuals who did not offend at all, individuals who offended alone, and individuals who participated in co-offending. Personality was measured using the Big Five Inventory, and offending was measured using an adaptation of Elliott and Ageton's (1980) self-reported delinquency scale. Various types of offending were examined. An online survey of 305 college students provided the data for analysis. To test the hypotheses, a variety of statistical methods including OLS regression, logistic regression, ANOVA and multinomial logistic regression were applied. There was some support for the relationship between certain personality factors (conscientiousness and

agreeableness) and offending. Agreeableness was the only factor shown to be significantly associated with co-offending. Agreeableness and conscientiousness were significantly able to differentiate between non offenders and co-offenders.

It could be seen from these empirical evidences that these studies strongly support that criminality had link with personality traits of whatever measure (Eysenck, Big Five, or NEO-I). It has also been shown that offenders/suspects differed from non-offenders/suspects on some personality traits. However, these studies have not pointedly related personality with any possible reason for involvement in crime or indeed any difference between these offenders and non-offenders on their general health status.

## **Psychological Health**

According to Goldberg and Hiller (1979) psychological health is an individual's physical and mental health status which includes a collection of physical signs, anxiety and insomnia, social dysfunction, and depression. It is a multidimensional phenomenon, integrating biological, psychological, social, and spiritual dimensions (Bartels & Boomsma, 2009; McDowell, 2010). It refers to a positive concept related to the social and emotional wellbeing of individuals and communities. The concept is culturally defined, but generally relates to the enjoyment of life, ability to cope with stresses and sadness, the fulfillment of goals and potential, and a sense of connection to others.

According to Wilkinson and O'Connor (1982) psychological health describes a congruent relationship between a person and his/her surrounding environments. The World Health Organization (WHO, 2007) defines psychological health as physical, mental, social wellbeing and not just lack of diseases and disability. They explained further that general health is a set of positive attributes, which can be better understood as a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community (WHO, 2007).

In a broader sense, psychological health captures the emotional and cognitive dimensions of the subjective experience resulting from the individual evaluation of several dimensions of life. It plays an important role in dynamism and efficacy of each person within the society (Keyes & Lopez, 2002). Conceptions of general health status vary from Hedonic and Eudemonic distinct but related and complementary approaches (Keyes et al., 2002; Huppert & Whittington, 2003). Hedonic refers to the emotional dimensions of the individuals' positive life experiencing (Diener, 1984), including absence of negative emotions, presence of positive emotions, life satisfaction and social involvement (Ryan & Deci, 2001). Eudaimonic refers to the harmony between the individuals goals and values and life experiences (Ryff et al., 2004), and is associated to individuals personal development (Ryan & Deci, 2001).

From perspectives of the discipline of positive psychology or holism, psychological health (mental wellbeing) may include an individual's ability to enjoy life and procure a balance between life activities and efforts to achieve psychological resilience. The attributes defining general health are universal. However, their expression differs culturally and in different contexts; and sensitivity to the factors valued by each culture and across varying political, economic, and social settings, increases the relevance and success of interventions (Sturgeon & Orley, 2005; Fisher & Baum, 2010).

### **Psychological Health and Personality Characteristics**

Many studies have shown the effect of personality, personality traits, and personality dimensions on general health status (e.g., Josefsson et al., 2011; Cloninger & Zohar, 2011; Cloninger, 1999; Cloninger, 2004; Cloninger, 2006; Diener & Biswas-Diener, 2008; Aboaja, Duggan, & Park, 2011; Chan & Joseph, 2000; Herero & Extremera, 2010; Wood & Tarrier, 2010; Joseph & Wood, 2010). A cumulative body of research suggests that some personality traits predispose individuals to experience specific life events (Luhmann, et al., 2012). For instance, Steel, Schmidt, and Shultz (2008) conducted a comprehensive meta-analysis and evaluated the associations between each personality factor and general health status. Their findings support a strong relationship between neuroticism, extraversion, agreeableness, conscientiousness and all components of general health questionnaire (GHQ), whereas openness to experience shows close

associations with the general health questionnaire facets of happiness, positive affects, and quality of life. In another meta-analysis by DeNeve and Cooper (1998), Neuroticism was most closely related with happiness, life satisfaction and negative affect, and Extraversion with positive affect.

Quevedo and Abella (2011) examined whether the facets of the Big Five Model and other personality characteristics not included in this model, such as optimism, self-esteem, and social support, are better predictors of general health than Big Five broad dimensions. They found that Neuroticism was negatively related with positive affect and Extraversion inversely related with negative affect. Neuroticism and Extraversion were associated to happiness; individuals with low Neuroticism and high Extraversion showed increased happiness. The findings also showed that the facets of these personality traits accounted for double the variance of general health status than the Big Five, although only 7 of 30 facets were relevant. More importantly, optimism, self-esteem and social support better explained the relationship between personality and general health status.

Moreira, Cloninger, Dinis, Sá, Oliveira, Dias and Oliveira (2014) examined the linear and non-linear associations between the dimensions of the psychobiological model of personality and general health (mental well-being) in adolescents. Participated in this study were 1540 adolescents ( $M=15.44$ ,  $SD=1.731$ ). Personality was assessed using the Temperament and Character Inventory (TCI). Well-being was evaluated in a composite perspective: satisfaction with social

support, health-related quality of life, satisfaction with life and affect. Variable-centered and individual-centered analyses were performed. Self-directedness was strongly associated with all dimensions of affective and cognitive well-being regardless of the other two character traits. Cooperativeness was associated with non-affective well-being and with positive affect, but only when associated to elevation of Self-directedness and Self-transcendence. Self-Directedness and Cooperativeness explained 15.5% of the non-affective well-being variance. Self-Directedness and Self-Transcendence explained 10.4% of the variance in affective well-being. This study confirms the tendencies found in previous studies with adults from other societies, where each character dimension gives an independent contribution to well-being depending on the interactions with other Character dimensions. Also, this study highlights the importance of considering the non-linear influences of the character dimensions in understanding of adolescents' wellbeing.

Ghorbani, Ahmadi, and Shayanc (2011) reviewed the relationship between type A personality and general health. The method of this study is a descriptive and correlation method. The sample group consists of 50 psychology students in Payam-e-Noor University in Babol, which were randomly selected and answered to two type A personality questionnaire and general health status questionnaire by Goldberg. In data analysis, Pearson Moment Correlation Analysis and Independent t-test were used. The results showed that between type A personality and mental

health, there is a significant relationship. Type As showed poorer mental health than Type B personality. The results indicated that there were no significant differences between mean mental health in the two groups of male and female respondents.

Shirazi, Khan and Ansari (2012) examined the relationship between general health status and personality characteristics among students. A total of 300 participants were randomly selected from Aligarh Muslim University, Aligarh, India. General health status was measured by General Health Inventory and personality characteristics were measured by neo-five factor inventory. Correlation, regression and independent t-test were used for analyzing the data. The result shows that there is significant correlation between general health and personality characteristics. The multiple regression analysis using the stepwise method found agreeableness, neuroticism and openness as significant predictors of general health. Finally independent t-test found no significant difference at the mean scores of professional and non-professional students' general health and personality characteristics in terms of gender.

Amini, Heidary, and Daneshparvar (2015) investigated personality traits and its impact on mental health of battered women in Tehran. In this cross-sectional study, 196 married women who referred to Tehran Legal Medicine Center were selected based on simple sampling method, and then were studied based on General Health Questionnaire (GHQ-28) and the NEO Five Factor Inventory

(NEO-FFI). In this cross-sectional study, the data were analyzed with the Pearson Product Correlation Test using the SPSS-16. The study revealed that statistically, mental health has a significant and positive correlation with neuroticism personality trait ( $r=0.318$ ,  $P<0.001$ ), while it has a significant but negative correlation with extraversion personality trait ( $r=-0.280$ ,  $P<0.001$ ), agreeableness ( $r=-0.201$ ,  $P=0.002$ ), and conscientiousness ( $r=-0.265$ ,  $P=0.001$ ).

These empirical evidences strongly suggest that personality traits are one of the core contributors to general health, alongside other factors such as self-esteem and social support. However, it would rather have made more sense, if these traits that were shown to have strong and significant relationships with general health are also studied on criminality. This will probably show whether they could act as mediating factors, direct influencing factors or relational factors to criminality in concert with general health tendencies.

## **Psychological Health and Criminal Behaviour**

Empirically, researchers have studied psychological health and its connection with crime. Specifically, studies have identified negative emotions, such as depression, anxiety, as motivating factors for delinquent behavior (e.g., Broidy & Agnew, 1997; Piquero & Selock, 2004). Others have shown that individuals with mental health disorders face higher arrest rates, have records of past violence, and are more likely to be victims of crime themselves (e.g., Choe, Teplin, & Abram, 2008; Elbogen & Johnson, 2009; Teplin, McClelland, Abram, & Weiner, 2005;

White, Chafetz, Collins-Bride, & Nickens, 2006). It has also been documented that adult prisoners and incarcerated adolescents suffer from mental illnesses at much higher rates than the general population (e.g., Marcotte & Markowitz, 2011). Even those with less severe mental health problems perform poorly in terms of behavioral outcomes. For example, Jiri, Thiel and Erni, (2002) investigated the relationship between criminal behavior on the one hand and endogeneity and anxiety on the other hand in a sample of patients with unipolar depression to help elucidate factors influencing the criminality rate in this population. A lower criminality rate in patients with higher ratings of endogeneity and anxiety was predicted. Clinical records of 179 male and 99 female psychiatric inpatients were retrospectively evaluated using the Newcastle Scale II and Hamilton Anxiety Scale. A full account of conviction records served as a measure of criminal behavior. Forty per cent of male patients and 7% of female patients were criminally registered. A lower criminality rate was indeed found in male and female patients with endogenous type of depression and in male patients with higher anxiety ratings. In a multivariate evaluation, however, socio-demographic variables in terms of age and social class seem to be more important predictors of criminality and all variables they assessed contributed only marginally to the explanation of the criminality variance. Thus, in patients with unipolar depression, socio-demographic factors seem to be of a greater even though still

limited importance regarding criminal behavior compared with the clinical variables of endogeneity and anxiety.

In another study, Jiri, Thiel and Erni, (2002) investigated criminal behavior in 261 male patients, diagnosed with affective disorders according to Research Diagnostic Criteria (RDC). Compared with matched controls from the general population, a significantly higher criminal rate was found for 82 bipolar patients and for 67 patients with unipolar minor or intermittent depression, but not for 112 patients with unipolar major depression. In another study, the relationship between endogeneity and anxiety to criminal behavior was investigated in a total of 278 psychiatric inpatients of both sexes and with all types of unipolar depression. The researchers expected the crime rate to be influenced by both variables; in particular, we predicted the criminal rate to be lower in anxious patients and in patients with endogenous depression, our hypothesis being based on the following reasoning.

Anderson, Cesur and Tekin (2012) examined the effect of depression during adolescence on the probability of engaging in a number of criminal behaviors using data from the National Longitudinal Study of Adolescent Health (Add Health). In their analysis, they control for a rich set of individual, family, and neighborhood level factors to account for conditions that may be correlated with both childhood depression and adult criminality. One novelty in their approach is the estimation of school and sibling fixed effects models to account for

unobserved heterogeneity at the neighborhood and family levels. Furthermore, they exploit the longitudinal nature of their data to account for baseline differences in criminal behavior. The empirical estimates show that adolescents who suffer from depression face a substantially increased probability of engaging in property crime. They found little evidence that adolescent depression predicts the likelihood of engaging in violent crime or the selling of illicit drugs. Their estimates imply that the lower-bound economic cost of property crime associated with adolescent depression is about 219 million dollars per year

Neelu, Prakash, Sengar and Singh (2015) assessed mental health problem in two groups of convicted criminals: murderers and rapists in terms of depression anxiety and stress. Based on purposive sampling technique, 72 convicted criminals were selected from BirsaMunda Central Jail Hotwar, Ranchi, India. Both the groups of criminals were matched on various socio-demographic parameters such as: gender, age, education, religion, marital status, residence and occupation. All participants were assessed on Depression Anxiety and Stress Scale (DASS). Obtained responses were scored by using standard scoring procedures and subsequently statistically analyzed by using Chi-square test. In the study, rapists group had shown significant difference on scale of depression in comparison to murderer's group. Whereas there were no significant differences found between both the groups on level of anxiety and stress. Mental health problems were found prevalent in both groups but more prominent in rapist's

group. Rapists group have shown more symptoms and severity of depression, anxiety and stress than the murderers group.

## **THEORIES OF CRIMINAL BEHAVIOUR**

### **Rational Choice Theory of Criminal Behaviour**

Rational Choice Theory of Criminal Behaviour was coined by Glasser (1967).

The theory suggests that the offender is completely rational when making the decision to commit a crime (Siegel, 2005). The variety of reasons for which one offends could be traced to a variety of personal needs and orientations, including: greed, revenge, need, anger, lust, jealousy, thrills, and vanity. The rational choice theory has its root in the classical school of criminology developed by Italian “social-thinker” Cesare Beccaria. Beccaria, suggests that people have free will to choose criminal or conventional behaviors...and that crime can be controlled only by the fear of criminal sanctions (Siegel, 2005). This was also complimented by the views of many criminologists, who suggest that choice theory is perhaps the most common explanation for why criminals do the things they do.

According to Burke (2001) within the rational choice theory there are three models of criminal behavior: rational actor, predestined actor model, and victimized actor. The rational actor proposed that individuals choose whether or not to commit a crime. With this belief, crime could simply be controlled by increasing the penalty of offending (Burke, 2001). The predestined actor model proposes that criminals cannot control their personal urges and environment, thus,

inducing them to commit crime. The way to solve this problem would then be to change the biological, sociological, and psychological environment of the offender (Burke, 2001). Finally, the victimized actor model proposes that crime is the result of the offender being a victim of an unequal society. Thus, the crime could be controlled by reforming legislation.

### **Social Process Theory of Crime**

Social process theorists believe that criminality is a function of individual socialization, and the interactions people have with organizations, institutions, and processes of society (Siegel, 2005). The most common approach to the social process theory is learning theory. Albert Bandura, an influential psychologist of the twentieth century, was the first to experiment with this idea. His observations began with animals and showed that they do not have to actually experience certain events in their environment to learn effectively (Barlow & Durand, 2006). In relation to criminality, one can learn to be aggressive by observing others acting aggressively. An example being: if “A” beats up other children on the playground and steals money from the victims, his little brother “B” is observing this situation. When “A” then uses the money to buy toys, “B” witnesses his big brother getting rewarded for the violent act through purchasing fun things to play with. In reality, it didn’t matter that “A” was wrong; his behavior had positive result.

There are two other approaches to social process theory. Social control theory is when one's behavior is groomed through the close associations of institutions and individuals. The second is social reaction theory. If an individual is already viewed (labeled) as a criminal from an early age, then it is more likely that this person will see becoming a criminal as fulfilling a prophecy, thus beginning his criminal career (Siegel, 2005).

### **The General Theory of Crime**

The general theory of crime was propounded by Gottfredson and Hirschi (1990). The core explanatory concept in their general theory is that individuals who commit crime, (which Gottfredson and Hirschi define as acts of force or fraud undertaken in pursuit of self-interest) are characterized by low levels of self-control. Following classical criminological theory, Gottfredson and Hirschi (1990) accept that individuals are governed by pain and pleasure and self-interest calculations. They lack innate conscience which extends beyond themselves and must be socialized to morality. Whether the pursuit of self-interest leads to criminal or to legal and non-deviant acts (i.e., self-interest pursued without fraud or force) is determined by levels of self-control, opportunities to experience pleasure or avoid pain, and situational constraints. For example, "the sense of immunity experienced by the offender, such things as darkness, anonymity, and vulnerability of the victim" (Gottfredson&Hirschi, 1989).

More specifically, everything else being equal, those individuals with low levels of self-control are more likely to commit self-interest acts of force or fraud than individuals possessing high levels of self-control. High self-control is a barrier that stands between the actor and the obvious momentary benefits crime provides (Hirschi&Gottfredson, 1993). Low self-control, or the propensity for deviance and criminality, leads to all forms of crime in all groups and all places and times. Levels of self-control also structure an individual's general success in life. This propensity is, itself, a bundle of traits: aggressiveness, impulsivity, self-centeredness, low intelligence, indifference to punishment, recklessness, pleasure orientation, or physical strength.

Some researchers have operationalized self-control in complex ways. Grasmick, Tittle, Bursik, and Arneklev, (1993) and Arneklev, Grasmick and Bursik (1993) identify six fundamental components of low self-control. Any attempt to evaluate the applicability of self-control theory, they argue, will prove more accurate using these components. First, individuals with low self-control are prone to impulsive behavior. They will act to fulfill immediate pleasures, lacking the foresight to weigh short-term gains against long-term advantages.

Other components are a preference for simple tasks and easy courses of action; seeking immediate gratification over longer, more complex and fulfilling tasks; risk and thrill seeking behavior; a preference for physical activity instead of mental or cognitive activity; self-centeredness characterized by indifference or

lack of sensitivity toward the needs and suffering of others; and temper, a lack of ability to resolve conflict through mature discourse, opting instead for physical confrontation.

Levels of self-control (as are the various components) are fixed early, during childhood. If a child does not receive proper parental supervision or is not handed out appropriate punishments for improper (or deviant) behavior, then the child will develop lower levels of self-control than if proper socialization had taken place. Gottfredson and Hirschi (1990) maintain that, once established, low levels of self-control will remain intact and unaffected by other conditions throughout the individual's life. Low levels of self-control alone do not explain crime, however. Again, they argued that the opportunity to commit crime must also exist. The individual must have easy access to objects, or find himself or herself in situations where crime can be committed with little perceived risk and obvious and immediate rewards. Further, Gottfredson and Hirschi (1990) noted the importance of age in committing crime- that is, as one ages, the propensity to commit crime declines. These three characteristics-propensity (or criminality), situational opportunity, and age-in concert and in conjunction, lead to crime.

The shortcomings of this general theory have been widely noted. The variables - crime and criminality - are so loosely defined that they cannot be operationalized consistently. Dependent and independent variables in the theory are indistinguishable, for as Hirschi and Gottfredson (1993) note, the best indicators

of self-control are the acts we use self-control to explain: criminal, delinquent, and reckless acts. The theory is tautological (Akers,1991). Hirschi and Gottfredson (1993) view this criticism as a compliment, for it supports the view that they followed the path of logic in producing an internally consistent result.

For the proponents also, the theory is impossible to disprove on its own terms, because for data apparently contrary to the theory carry weight only when supported by an alternative theory (Hirschi&Gottfredson, 1993). Merely empirical falsification is not enough. Lastly, the operationalized equation of self-control with acts (the tautology or logical consistency) undermines a basic assertion of the theory. Self-control (including criminality) is an internal condition; individuals possess it to different degrees. Acts (crimes), on the other hand, result from the balance of pressures created by internal motivations, objective and perceived opportunities, and age. The conceptual or logical problem is this: if self-control is indicated by criminal acts, then opportunities and age are unnecessary for measurement of explanation. If opportunity and age matter, then internal states cannot be indicated by acts determined by the balance of external and internal forces.

Despite such conceptual critiques, much effort has been expended to operationalize the variables and test the theory's predictions. Factual support of many assertions is clearly contradictory, leading the authors to "perform wondrous mental gymnastics" (Palumbo, 1992) and "intellectual contortions"

(Tittle, 1991) to reconcile theory and reality. The most widely criticized factual assertion of the theory is that white-collar criminals have the same low levels of self-control as street criminals. For example, Benson and Moore (1992) analyzed the criminal records of both white-collar and street criminals to test the notion that white-collar criminals are both criminally versatile and equally prone to engage in deviant behavior as common offenders. Although some white-collar criminals were found to engage in other deviant acts as frequently as common offenders, the majority of white-collar offenders did not.

### **Personality and Criminal Behaviour (Emphasis on Big Five)**

The first person to explore the utility of personality traits in explaining criminal behavior was Eysenck (1964). Eysenck asked the very important question: “Why do most people lead relatively blameless lives, rather than indulging in a career of crime?” (p. 102). He suggested that within everyone is a conscience, or “inner guiding light” that keeps one from committing crime. The person who does not develop conditioned moral and social responses (or a conscience, which is a result of low ability to be conditioned and extraversion) will be more likely to engage in criminal or deviant activities. Conscience is related to functions of the autonomic nervous system, which is made up of glands and involuntary muscles. The body can be conditioned to exhibit certain autonomic responses to external stimuli, as well as internal cognitive processes such as anxiety and fear.

Once an individual has been conditioned to know that certain unacceptable behaviors will be punished, predictable and involuntary physiological reactions will take place if that behaviour is completed. That is why a deterrence explanation of criminal behavior is inaccurate, according to Eysenck (1964). Crime is not always detected, nor does it always merit punishment. Therefore, the deterrents that keep individuals from committing crime must be the autonomic reactions. This fear/anxiety reaction actually takes place even before a crime is committed. At the time a criminal act is contemplated, there is an immediate and unpleasant reaction in an individual who has a conditioned conscience. The closer one gets to actually committing the act, the greater the unpleasant reaction becomes; he argued.

This process will deter crime long before the judicial system or any other social institution ever becomes aware of the action. Eysenck saw biology as the primary basis for personality traits. The main tenet of his theory is that an optimal level of cortical arousal (stimulation of the cortex within the brain) is within each person. Behavior or physical performance tends to deteriorate when arousal is increased or decreased beyond this optimal level (Eysenck, 1964).

After a factor analysis of his own, he developed two categories of personality classification. His two categories were extraversion/introversion and neuroticism/stability. Extraverts were people who were poorly conditioned, but who were also outgoing and talkative due to their need for external stimulation to

keep their arousal levels optimal and their performance maximized. On the other hand, introverts were quiet and reserved due to excessive arousal. A quiet environment would bring the introvert back to a level of optimal performance. Neurotic individuals were unable to control their emotions and were easily upset. This person was more likely to experience anxiety and depression. The opposite was the stable person who was able to maintain calm in stressful situations.

After more research, Eysenck's work was expanded to include a third category of personality that he termed psychoticism/socialization (Eysenck&Eysenck, 1985). Psychoticism referred to individuals with higher levels of testosterone in the body who were seen not only as people who were emotionally unstable, but as people who were more likely to become violent or aggressive. Characteristic behavior of the psychotic individual included: aggression, impulsiveness, non-conformity, and hostility.

To support his theory, Eysenck (1964) provided research showing that extraverted people were harder to condition than introverted individuals. Psychopaths also had a tendency to be harder to condition. In addition to that, he also presented research supporting the assertion that people who commit crimes are more introverted than non-criminal individuals, and those generally scoring higher on psychoticism, extraversion and neuroticism (PEN) were more likely to engage in criminal activities (Eysenck, 1964).

This relationship can be better explained by looking at the link between the biological basis for Eysenck's (1964) theory and each of the traits. Hormones associated with the nervous system are responsible for the level of arousal in individuals. An absence of these hormones or lack of arousal can lead to the creation of extreme extraverts. Due to this perpetual state, that individual seeks excitement and lacks restraint. A criminal who is labeled neurotic would be moody and exhibit very emotional behavior. A psychotic criminal would be someone who is impulsive, acts without thinking, and may also lack the ability to empathize with others (Monte & Sollod, 2003). This pattern held true for myriad behaviors such as traffic violations, sexual promiscuity, recidivism in prisoners and general delinquency (Eysenck, 1964).

It is often pointed out that Eysenck's PEN model is very different from the Five Factor Model. Eysenck only has three factors and one of those factors does not correspond with the FFM at all. Even though Eysenck's (1964) three factors were published almost 20 years prior to the widespread acceptance of the FFM, there is actually an overlap between Eysenck's factors and the FFM. The factors of extraversion and neuroticism are the same. Eysenck (1992) argued that psychoticism actually encompasses certain aspects of both agreeableness and conscientiousness in the FFM.

## **EMPHASIS ON BIG FIVE PERSONALITY**

Studies using personality models such as the Five-Factor Model (FFM) (McCrae & Costa, 1991; Gutiérrez et al., 2005), found negative associations between Neuroticism and happiness and general wellbeing (Stewart et al., 2005; Garcia, 2011), positive associations between Neuroticism and negative affect, between Openness and positive affect and between Conscientiousness and life satisfaction (DeNeve & Cooper, 1998; Garcia, 2011). Extraversion was found to be positively related to positive affect (Diener et al., 2003; Lyubomirsky et al., 2006; Garcia, 2011). Eysenck's dimension of Extraversion was found to be associated to happiness and to loneliness and Neuroticism was negatively correlated to happiness (Cheng & Furnham, 2002). Mixed results of positive relation (Huebner et al., 2004) and absence of relation (Rigby & Huebner, 2005) have been found for the relation between Extraversion and life satisfaction.

### **Theoretical Framework Guiding the Present Study**

The theoretical framework guiding the present study is the Social Cognitive Theory by Bandura (1977), which claims that behaviour is explained as guided by cognitions between the stimulus and response. It emphasizes that the simple S-R paradigm is inadequate to explain human behaviour since humans cogitate based on already acquired information. Bandura (1977) further posited that forces of memory and emotions worked in conjunction with environmental influences in defining an individual's basic characteristics and behaviour across situations.

From this perspective, personality development depends mainly on both the functionality of the brain (and other physiological systems), the perceptual system, and socialization. One's pattern of behaviour across situation must be largely learnt, and learning involves both operant and classical conditioning. It is logical that both the Social Process theory of crime, and the Rational Choice theory of crime are derivatives of the broader social cognitive theory. The social cognitive theory suitably explains personality formation, and further holds that since one's response to a stimulus is born out of cogitation, weighing all options, examining the possible gains, and losses, and possibly juxtaposing these with resources at one's disposal, criminal behaviour must therefore be a decision just like any other behaviour except ofcourse in cases of loss of touch with reality (insanity or intoxication). It is thus persuasive that some personality attributes are more likely than others to predispose to criminality, just as some health conditions (especially psychological health condition).

## **HYPOTHESES**

- i. Personality traits will correlate with domains of psychological health among criminal suspects and non-suspects in Anambra State.
- ii. Personality traits will differ significantly between criminal suspects and non-suspects in Anambra State.

- iii. Psychological health will differ significantly between criminal suspects and non-suspects in Anambra State.

## **CHAPTER THREE**

### **METHOD**

This chapter shows details of the method used in the study. It is specifically divided into four subheads of: Participants, Instrument (including their Validity and Reliability), Procedure, and Design and Statistics.

#### **Participants**

A total of 158 participants (80 crime suspects and 78 non suspects) selected from Nigeria Prisons, Awka Division and Nnamdi Azikiwe University, Awka participated in the study. They comprised crime suspects who were selected using purposive sampling technique and part-time undergraduates of Nnamdi Azikiwe, University, Awka, selected using simple random sampling technique. The inclusion criteria for prison inmates (crime suspects) was having been arrested and detained in prison for a minimum period of one week and having attempted senior school certificate, while that of the undergraduates was based on their age. This was done to be able to control for age as an extraneous variable. Their ages range between 20 and 35 years, with the mean age of 28.23 and standard deviation of 4.40.

#### **Instruments**

Two instruments were used for data collection: First is the Big Five Personality Inventory (BFI) developed by John, Donahue, and Kentle (1991), validated by

Umeh (2004). This is a 44-item inventory is a psychological instrument which assesses personality from a five-dimensional perspective. The essence of the perspective is that personality characteristics could be resolved into five broad dimensions, which are distinct from one another. The five dimensions or subscales of BFI are: 1. Extraversion – high energy and activity level, dominance, sociability, expressiveness and positive emotion; 2. Agreeableness – Prosocial, altruism, tender mindedness, trust and modesty; 3. Conscientiousness – impulse control, task orientation, goal directedness; 4. Neuroticism – anxiety, sadness, irritability and nervous/tension and 5. Openness to Experience – exemplifies the breath depth and complexity of an individual's mental and experiential life.

The original mean divergent validation indices by Costa and McCrae (1992), and Goldberg (1992) respectively were .75 and .85. John, Donahue and Kentle (1991) reported Cronbach Alpha reliability coefficients of .80 and 3-month test-retest score of .85, while Umeh (2004), who provided validity indices for Nigerian sample reported the divergent validity coefficients for Extraversion .05, Agreeableness .13, Conscientiousness .11, Neuroticism .39 and Openness to Experience .24.

Another is the 12-Item General Health Questionnaire (GHQ-12) developed by Goldberg and Williams, (1988). This a dimensional instrument, which has been widely and extensively used as a short screening instrument, producing results that are comparable to longer versions of the GHQ. It consists of two dominant

factors of Anxiety and Depression, and Social dysfunction, each one assessing the severity of psychological distress experienced by an individual within the past few weeks using a 4-point Likert-type scale (from 0 to 3). This scale focuses on breaks in normal functioning rather than on life-long traits; therefore, it only covers disorders or patterns of adjustment associated with distress. Each item on the scale has four responses from “better than usual” to “much less than usual.” The item scores are used to generate a total score ranging from 0 to 36. The positive items are scored from 0 (*always*) to 3 (*never*) and the negative ones from 3 (*always*) to 0 (*never*). High summation scores indicate worse health.

Goldberg and Williams, (1988) reported Cronbach alpha coefficient for the GHQ, and it ranged from 0.82 to 0.86. Morakinjo (1979) found the sensitivity of GHQ to be 69.7%, specificity -96.0%, and overall misclassification rate of 10.7% using a cut-off of 12. However, the instrument is considered reliable and has been translated into 38 different languages. Lasebikan and Oyetunde(2012), and Okwaraji and Aguwa (2014) have used the GHQ-12 in Nigerian studies; while Guruje and Obikoya (1990) had used the GHQ-12 as a screening tool in Primary Health Care System.

## **PROCEDURE**

An introduction letter signed by the Head of Department of Psychology, NnamdiAzikiwe University, Awka, was taken to the Head of the Nigerian Prison Service, Awka, for approval. On getting the approval, copies of questionnaire

were administered to prison inmates who meet the inclusion criteria. They were sampled using purposive sampling technique. This is a sampling technique whereby the researcher chooses the sample based on who they think would be appropriate for the study. It is primarily used with small characteristic restricted population (i.e. subjects that possess the required research characteristics).

However, the undergraduates were sampled using simple random sampling techniques from a Department in the Faculty of Social Sciences, NnamdiAzikiwe University, Awka. The simple sampling technique was adopted because it is that sampling technique that gives every member of the population equal chance of participating in the study. Participants were enrolled through the assistance of the President of Faculty Students Association in Unizik.

Out of 180 copies of the questionnaire administered, 158 were properly filled and returned and were used as actual data in the study; while 17copies were not properly filled,5 copies were not returned.

## **DESIGN AND STATISTICS**

The study is a combination of correlational and between subject designs. It employed Zero Order Correlation Metrics Coefficients to test hypothesis 1, while hypotheses 2 and 3 were tested using Multiple Analysis of Variance. This is so because hypothesis I, measures the strength and direction of the linear relationship between personality and general health; while hypotheses 2 and 3 measure the differences in general health and personality traits between the studied population

(criminal suspects and non-suspects). However, the researcher adopted this statistics (Multiple Analysis of Variance) because of the multiple levels of the studied variables.

## CHAPTER FOUR

### RESULTS

This chapter shows details of the result of Zero Order Correlation Metrics Coefficients and Multiple Analysis of Variance on personality and psychological health: a comparative study of criminal suspects and non-suspects in table 1 and 2 below:

**Table 1**

**Zero-order Correlation Matrix of Correlation between GHQ-12 and Personality Traits**

Factors	1	2	3	4	5	6	7	8
1. Extraversion	1							
2. Agreeableness	.68**	1						
3. Conscientiousness	.57**	.70**	1					
4. Neuroticism	-.56**	-.63**	-.43**	1				
5. Openness	.56**	.58**	.64**	-.24**	1			
6. Social Dysfunction	<b>-.30**</b>	<b>-.42**</b>	<b>-.50**</b>	<b>.28**</b>	<b>-.69**</b>	1		
7. Anxiety/Depression	<b>-.50**</b>	<b>-.57**</b>	<b>-.30**</b>	<b>.51**</b>	<b>-.47**</b>	<b>.78**</b>	1	
8. Age	<b>.26**</b>	<b>.27**</b>	<b>.38**</b>	<b>.28**</b>	<b>.31**</b>	<b>.38**</b>	<b>.37**</b>	1

\*p<.05; \*\*p<.01; **Bold Value** correlation coefficient of domains of GHQ-12 and personality traits

The result in table 1 above showed that Extraversion had negative correlation with social dysfunction ( $r=-.30$ ), Agreeableness had a negative correlation with social dysfunction ( $r=-.42$ ), Conscientiousness had a negative correlation with social dysfunction ( $r=-.50$ ) and finally Openness to experience had a negative correlation with social dysfunction ( $r=-.69$ ); while Neuroticism had a positive correlation with social dysfunction ( $r=.28$ ). This indicates that increment in the trait of neuroticism related to increment in social dysfunction, while increment in the traits of extraversion, agreeableness, conscientiousness and openness to experience related to decrease in social dysfunction among the studied population. Similarly, the same table showed that Extraversion had negative correlation with Anxiety/ Depression ( $r=-.51$ ), Agreeableness had a negative correlation with Anxiety/ Depression ( $r=-.57$ ), Conscientiousness had a negative correlation with Anxiety/ Depression ( $r=-.30$ ) and finally Openness to experience had a negative correlation with Anxiety/ Depression ( $r=-.69$ ); while Neuroticism had a positive correlation with Anxiety/ Depression ( $r=.51$ ). This indicates that increase in neuroticism translated to increase in Anxiety/Depression; while increase in the traits of extraversion, agreeableness, conscientiousness and openness to experience translated to decrease in anxiety/depression among the studied population.

**Table 2****Differences in personality traits and domains of general health**

Source	Dependent Variable	Type III	Squares	df	Square	F	Sig.
S/Population	Extraversion		186.464	1	186.464	7.678	.006
	Agreeableness	37.953	37.953	1	.784	.377	
	Conscientiousness	18.780	18.780	1	18.780	.309	.579
	Neuroticism	.371	.371	1	.371	.008	.927
	Openness	2.468	2.468	1	2.468	.039	.844
	Social Dysfunction	250.108	250.108	1	250.108	29.850	.000
	Anxiety/Depression	128.820	128.820	1	128.820	22.991	.000
Total	Extraversion		4000.254	157			
	Agreeableness		7679.247	157			
	Conscientiousness		9371.500	157			
	Neuroticism		6846.589	157			
	Openness		9863.519	157			
	Social Dysfunction		1629.975	157			
	Anxiety/Depression		1010.437	157			

Table 2 showed that crime suspects differed significantly from non-suspects in extraversion  $F(1,157) = 7.68, p = .01$ ; while no significant difference was observed in the personality traits of (i) Agreeableness  $F(1,157) = .78, p = .38$ , Conscientiousness  $F(1,157) = .31, p = .58$ , Neuroticism  $F(1,157) = .01, p = .93$  and Openness to experience  $F(1,157) = .704, p = .84$  among the studied population. Also, the table showed that crime suspects differed significantly from non-suspects in social dysfunction  $F(1,157) = .29.85, p = .00$  and Anxiety/Depression  $F(1,157) = .22.99, p = .00$ .

### **Summary of Findings**

From the findings, it was discovered that at the probability level of  $p < .05$ , the first hypothesis which stated that ‘Personality would correlate with domains of psychological health among crime suspects and non-suspects in Anambra State,’ was upheld. Similarly, the second hypothesis, which stated that ‘Personality traits would differ significantly between crime suspects and non-suspects in Anambra State,’ was also upheld. Finally, the third hypothesis, which stated that ‘Psychological health would differ significantly between crime suspects and non-suspects in Anambra State,’ was upheld.

## CHAPTER FIVE

### DISCUSSION AND CONCLUSION

#### **Discussion**

Statistical analysis confirmed that hypothesis one was upheld. Thus, there was a statistically significant correlation between the domains of the Big Five Personality and those of the General Health Questionnaire. Detail showed that only neuroticism correlated positively with both social dysfunction and Depression/Anxiety, while the other domains correlated negatively. Thus, high neuroticism is likely to predict both high social dysfunction, and high Depression and Anxiety.

Neuroticism as described by the Big Five connotes nervousness, stress, being unstable, loss of confidence, being doubtful or being/feeling uncertain. These characteristics surely predispose to poor cogitation and poor utilization of personal resources. It follows logically that those who are high in neuroticism may behave irrationally many a time and this may affect the way they take care of events in their lives, including their health. Additionally, it is possible that poor psychological health was responsible for the high score in neuroticism. What is very clear however is that neuroticism is a factor in poor psychological health. This finding is in line with the DeNeve and Cooper (1998) who showed in their study on personality factors and general health that Neuroticism was most closely

related with happiness, life satisfaction and negative affect, and Extraversion with positive affect. It is also in line with the study of Shirazi, Khan and Ansari (2012) who examined the relationship between general health status and personality characteristics among students. The result showed that there is significant correlation between general health and personality characteristics. The multiple regression analysis using the stepwise method found agreeableness, neuroticism and openness as significant predictors of general health. Furthermore, the study agrees with the findings of Amini, Heidary, and Daneshparvar (2015) who investigated personality traits and its impact on mental health of battered women in Tehran. The study revealed that statistically, mental health has a significant and positive correlation with neuroticism personality trait, while it has a significant but negative correlation with extraversion personality trait, agreeableness, and conscientiousness.

It is slightly in line with the study of Quevedo and Abella (2011) who examined whether the facets of the Big Five Model and other personality characteristics not included in this model, such as optimism, self-esteem, and social support, are better predictors of general health than Big Five broad dimensions. They found that Neuroticism was negatively related with positive affect and Extraversion inversely related with negative affect. Neuroticism and Extraversion were associated to happiness; individuals with low Neuroticism and high Extraversion showed increased happiness; and that of Steel, Schmidt, and Shultz (2008) who

conducted a comprehensive meta-analysis and evaluated the associations between each personality factor and general health status. Their findings support a strong relationship between neuroticism, extraversion, agreeableness, conscientiousness and all components of general health questionnaire (GHQ), whereas openness to experience shows close associations with the general health questionnaire facets of happiness, positive affects, and quality of life.

As for the positive correlation between other facets of the Big Five and GHQ, the highest correlation seems to be Depression/Anxiety. Openness to experience in this stance alludes to creativity, sensitivity, curiosity and independence. These qualities are very positive qualities for logical empirical reasoning, which predisposes to such philosophies as ‘When things get tough, the tough gets going,’ or ‘Determination is success,’ or ‘Where there is a will, there is a way,’ or ‘No one is a winner all the time.’ It is plausible that such thoughts and beliefs predispose to rational exercise of personal faculties and resources hence engender positive psychological health.

Analysis for hypothesis two which tested whether the two groups would differ significantly in their psychological health was upheld. Suspects reported significantly higher social dysfunction than non-suspects. They as well reported significantly higher Anxiety/Depression than non-suspects. These findings align to those of Jiri, Thiel and Erni, (2002) who investigated criminal behavior in 261 male patients, diagnosed with affective disorders according to Research

Diagnostic Criteria (RDC). Compared with matched controls from the general population, a significantly higher criminal rate was found for 82 bipolar patients and for 67 patients with unipolar minor or intermittent depression, but not for 112 patients with unipolar major depression.

Poor psychological health may indeed prelude criminality, and to arrest and detention. It is also possible that poor psychological health developed during detention as a reaction to stress, rejection, deprivation, or even torture. However, it has been observed that people with poorer psychological health are less able to cope with stress, they become easily frustrated, and are less likely to endure delayed gratification, hence their health status may indeed predispose them to acts that led to their being in custody. This is in tandem with the predispositions of the Arousal Theory of Crime (Gottfredson&Hirshi, 1990), which holds among others that persons with low levels of self-control are more likely to commit acts of force or fraud. Again, psychobiological studies seem to support this, since alterations in neurochemistry due to stress have been found to lead to low frustration tolerance, and loss of inhibition, which have been implicated in aggression and criminality.

For hypothesis three, it was only for extraversion that there was statistically significant difference between suspects and non-suspects. Suspects were lower in extraversion than non-suspects. This implied that the suspects were less in sociability, expressiveness, positive emotion, and activity level than non-suspects. One would have thought that the opposite state should obtain, however, if

viewed from the angle that 'introverts' often exhibit outburst of emotions which may lead to aggression, and that people who stay on their own do not enjoy social support, it is a possible explanation that such people may resort to fraudulent ways to solve their problems. They are also more likely to plan revenge against perceived 'enemies' than those who talk things over.

There is however another possible explanation for the observed difference: it may be that the incarcerated persons having lost contact with people and being subjected to dehumanizing environment and treatment, developed the characteristics which are represented by low extraversion. This is more likely to obtain among persons who have stayed in custody for reasonable period of time, who may not be finding things 'easy' in the cells, and who might have lost hope of assistance.

This finding aligns with the studies of Khan (2014) who compared the personality dimensions of suspects and non-suspects of Khyber Pukhtonkhwa (KPK). Findings of the study confirmed the hypothesis that the suspects would score higher on all the four dimensions of Eysenck personality scale as compared to non-suspects. It was proved that suspects had higher scores on psychoticism, neuroticism, extraversion, and lie as compared to non-suspects.

### **Limitation and Suggestion for Further Studies**

The major limitation is the measure of psychological health. There are other measures of psychological health that were not covered in the study which may be very important. For instance, Symptom Distress Checklist (SCL-90) covers 10 domains of psychological health which are not within the scope of the present study. Other studies can explore these domains.

### **Implication of the Study**

It tells a lot about the physical and psychological conditions people meet in prisons. The prison environment is highly uninhabitable as space and other living amenities are grossly inadequate, which may in turn affect the psychological health of detained suspects. It has implication for psychological health and this may also be linked to some personality traits e.g. extraversion. It was suggested by the result that psychological health related negatively to some traits and positively to neuroticism. By this, psychotherapists, forensic psychologists and other allied professionals working with human beings should target their psychological health, in order to reduce the impact on personality.

It has further implication for judicial and law enforcement (police, prison officers and other allied professions) prosecutors. Thorough investigation and standard humane process should be encouraged in arresting and detaining of individuals because unlawful and illegal detentions have obvious implication for individuals involved, as suggested by the findings of the study.

### **Recommendation**

The findings of this research recommended that besides being useful in the pursuit for apprehending/identifying possible perpetrators of crime, Judicial Panels and the Courts should note the health status of individuals before adjudication, during incarceration, and at the point of discharge from prison. This will enable authorities concerned to treat the people affected before letting them back into the society. For example, if a person is found to be psychologically unstable before committing a crime, aspects of section 28 of the criminal code should apply to mitigate several sentencing. Also, if the condition becomes developed while in detention, the person should be treated and possibly given further rehabilitation attention to avoid recidivism.

As for observed differences in personality between the groups, whereby it was for only extraversion that significant difference was observed, it is recommended that personality screening be requested by the courts for persons being tried, especially for gang actions, as collaborative evidence.

Further studies in this area of research should expand the scope by using more number of participants from varied locations, including police cells. It may also be very informative to attempt a longitudinal study to find out whether there are alterations in personality or health due to periods of incarceration. A comparison of sentenced prisoners and awaiting trials may also yield interesting results.

## **Conclusion**

Criminality, a global phenomenon is not only the most dangerous threat to human existence, but a major issue of economic and psychological health decadence. Government and individuals do commit enormous resources to contain this menace; unfortunately, criminals have become so sophisticated that they are rarely trapped in action. This necessitates the equipment of law enforcement and investigative officers with knowledge on ways to track down offenders after they might have escaped from crime scenes.

Although, a good number of research had been carried out on factors that predispose to criminality, not much has been done on the relatedness of personality, psychological health and criminality, more so, using awaiting trials as participants.

Among other theories, the social cognitive theory seems to capture the relationship between development of personality attributes, choices (rational thinking or otherwise) and the economic concomitants of criminal behaviour. Hence, it implies that one decides to go into crime after due cogitation concerning the possible outcomes, which is done with ones resources, victim's resources, and possibility of this apprehended in perspective.

Empirical evidence for this study strongly suggests that: particularly traits correlate with psychological health; Neuroticism was positively and significantly related to poor psychological health. Criminal suspects did not differ significantly from non-suspects in the traits of agreeableness, conscientiousness, neuroticism

and openness to experience, but differed in extraversion, with criminal suspects being extroverted than non-criminal suspects.

Again, criminal suspects differed significantly from non-suspects in the domains of psychological health. Notably, suspects reported significantly higher social dysfunction and anxiety/depression than non-suspects. It is therefore advocated that psychological health and personality testing should be made part of routine interrogation procedures for criminal suspects.

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# APPENDIX I

## Questionnaire

### Dear Respondent

I am a Master's Student of Psychology Department in NnamdiAzikiwe University Awka. I am currently conducting a research necessary for Mastery in Psychology.

I humbly request you to kindly respond to the items below carefully and accurately. I assure you that this exercise is specifically for academic purposes.

Thanks for your anticipated co-operation.

### SECTION A

**Instruction:** The following are statements people often use to describe themselves. Read each statement carefully and indicate the extent to which it is a true description of you as you see yourself by shading only one of numbers 1, 2, 3, 4, 5 in front of each statement. It is not a test, so there are no right or wrong answers. Work rapidly.

The numbers stand for:

- 1) Disagree strongly                      2) Disagree a little
- 3) Neither agree or disagree            4) Agree a little 5) Agree strongly

	I see myself as:					
1	Someone who is outgoing and sociable	1	2	3	4	5
2	Someone who is a talkative	1	2	3	4	5

3	Someone who has an assertive personality	1	2	3	4	5
4	Someone who generates a lot of enthusiasm	1	2	3	4	5
5	Someone who is full of energy	1	2	3	4	5
6	Someone who is reserved	1	2	3	4	5
7	Someone who is sometimes shy, inhibited	1	2	3	4	5
8	Someone who tends to be quiet	1	2	3	4	5
9	Someone who is considerable and kind to almost everyone	1	2	3	4	5
10	Someone who likes to cooperate with others	1	2	3	4	5
11	Someone who is helpful and unselfish with others	1	2	3	4	5
12	Someone who has a forgiven nature	1	2	3	4	5
13	Someone who is generally trusting	1	2	3	4	5
14	Someone who tends to find fault with others	1	2	3	4	5
15	Someone who starts quarrels with others	1	2	3	4	5
16	Someone who can be cold and aloof	1	2	3	4	5
17	Someone who is sometimes rude with others	1	2	3	4	5
18	Someone who does a thorough job	1	2	3	4	5
19	Someone who does things efficiently	1	2	3	4	5
20	Someone who makes plans, follows through with them	1	2	3	4	5
21	Someone who is a reliable worker	1	2	3	4	5
22	Someone who perseveres until the task is finished	1	2	3	4	5

23	Someone who is easily distracted	1	2	3	4	5
24	Someone who can be somewhat careless	1	2	3	4	5
25	Someone who tends to be lazy	1	2	3	4	5
26	Someone who tends to be disorganized	1	2	3	4	5
27	Someone who worries a lot	1	2	3	4	5
28	Someone who can be tense	1	2	3	4	5
29	Someone who gets nervous easily	1	2	3	4	5
30	Someone who is depressed, blue	1	2	3	4	5
31	Someone who can be moody	1	2	3	4	5
32	Someone who remains calm in tense situation	1	2	3	4	5
33	Someone who is emotionally stable, not easily upset	1	2	3	4	5
34	Someone who is relaxed, handles stress well	1	2	3	4	5
35	Someone who is inventive	1	2	3	4	5
36	Someone who is original, comes up with new ideas	1	2	3	4	5
37	Someone who values artistic, aesthetic experiences	1	2	3	4	5
38	Someone who has an active imagination	1	2	3	4	5
39	Someone who likes to reflect, play with ideas	1	2	3	4	5
40	Someone who is sophisticated in art, music or literature	1	2	3	4	5
41	Someone who is ingenious, a deep thinker	1	2	3	4	5
42	Someone who is curious about many different things	1	2	3	4	5

43	Someone who prefers work that is routine	1	2	3	4	5
44	Someone who has few artistic interests	1	2	3	4	5

**SECTION B**

**Instructions:** Please kindly tick the one which applies to you

Have you recently

A. Been able to concentrate on what you are doing?

0) Better than usual

1) Same as usual

2) Less than usual

3) Much than usual

B. Lost much sleep over worry?

0) Not at all

1) No more than usual

2) Rather than usual

3) Much more than usual

C. Felt that you are playing a useful part in things?

0) More so than usual

1) Same as usual

2) Less than usual

3) Much less than usual

D. Felt capable of making decisions about things?

0) More so than usual

1) Same as usual

2) Less than usual

3) Much less than usual

E. Felt constantly under a strain?

0) Not at all

1) No more than usual

2) Rather than usual

3) Much more than usual

F. Felt you couldn't overcome your difficulties?

0) Not at all

1) No more than usual

2) Rather more than usual

3) Much more than usual

G. Been able to enjoy your normal day to day activities?

0) More so than usual

1) Same as usual

2) Less than usual

3) Much less than usual

H. Been able to face up to your problems?

0) More so than usual

1) Same as usual

2) Less than usual

3) Much less than usual

I. Been feeling unhappy or depressed

0) Not at all

1) No more than usual

2) Rather more than usual

3) Much more than usual

J. Been losing confidence in yourself?

0) Not at all

1) No more than usual

2) Rather more than usual

3) Much more than usual

K. Been thinking of yourself as a worthless person?

0) Not at all

1) No more than usual

2) Rather more than usual

3) Much more than usual

L. Been feeling reasonably happy, all things considered?

0) Not at all

- 1) No more than usual
- 2) Rather more than usual
- 3) Much more than usual

**Section C**

**PERSONAL DATA**

**Age:**  **Gender:** Male  Female

**Educational Qualification:** SSCE  OND/NCE  B.Sc.

**L.G.A.:**  **State of origin:**

**Religion:** Christian  Muslim  African Traditionalist

**Crime Accused of:**