

**Assessing Psychopathy Among Male Prisoners in the Democratic
Republic of Congo: A Cross-cultural Analysis in a Post-crisis Setting**

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ABSTRACT

The personality construct of psychopathy is of interest because it may identify a distinct group of criminals with longer criminal careers, greater association with violence, and higher rate of relapse than other types of criminals. This study addressed the measurement of psychopathy across cultures using the French version of the Psychopathy Checklist Revised (PCL-R). Most research on the PCL-R has been conducted in North America and Europe, very little in Sub-Saharan Africa, and none at all in the Democratic Republic of Congo, a country torn by war and violence since its independence in 1960. The aim of this study was to test the cross-cultural validity of the PCL-R instrument by examining its psychometric properties among 336 male prisoners in the Democratic Republic of Congo. The findings were that the psychometric properties of the scale among PCL-R among male Congolese were generally moderate, suggesting that the PCL-R has adequate internal consistency and reliability in the DRC. However, specific items had low item-total correlations and potential reasons for this in terms of the cultural meaning of symptoms and behaviours are discussed. Further work is needed to refine and validate the PCL-R in the Democratic Republic of Congo and to determine its proper cutoff score.

RÉSUMÉ

Le concept de personnalité psychopathique est d'un grand intérêt puisqu'il permet d'identifier un groupe distinct des criminels avec une plus longue carrière criminelle, un taux élevé d'association avec la violence associés avec des récidives plus fréquentes que les autres catégories des criminels. Cette étude porte sur la mesure de la psychopathie à travers les cultures en utilisant la version française de l'échelle de psychopathie révisée de Hare (PCL-R). La plupart des recherches sur le PCL-R ont été menées en Amérique du Nord et en Europe, très peu en Afrique Sub-Saharienne et aucune en République Démocratique du Congo, un pays déchiré par la guerre et la violence depuis son indépendance en 1960. Le but de cette étude est de tester la validité interculturelle du PCL-R, en examinant ses propriétés psychométriques chez 336 prisonniers congolais de sexe masculin. Les résultats de cette étude indiquent que toutes les propriétés psychométriques recueillies en utilisant le PCL-R parmi les congolais sont basses d'une manière générale. Cela pourrait être dû à l'influence des facteurs culturels. Cependant, bien que ces valeurs soient basses, elles se situent dans les limites acceptables par rapport aux données rapportées dans les études normatives effectuées en Amérique du Nord et en Europe, ce qui suggère que le PCL-R a une bonne consistance interne et une bonne fiabilité. L'analyse factorielle s'est avérée non significative, probablement à cause des différences dans le fonctionnement du système judiciaire entre l'Amérique du Nord et la République Démocratique du Congo. Cela démontre qu'il est important de compléter cette étude par la validation de PCL-R au Congo et de déterminer son point de coupure et le taux de prévalence de la psychopathie dans la population générale, en milieu carcéral et dans les deux sexes.

CHAPITRE 1 : INTRODUCTION

Psychopathy is a specific form of personality disorder characterized by the following three major symptom dimensions: (i) an arrogant and deceitful interpersonal style; (ii) deficient affective experience; and (iii) an impulsive and irresponsible behavioural style (Cleckley, 1941; Karpman, 1948; McCord & McCord, 1964; Milton, 1981; Hare, 1991, 2003). Psychopathy has been related to various diagnostic constructs including psychopathic, antisocial, dissocial, and sociopathic personality disorder (Cooke et al., 2004). However, psychopathy is not equivalent to antisocial personality as defined in DSM-IV, which covers a broader group with criminal behaviour but without the set of personality traits. Psychopathy is a condition affecting less than 1% of the household population, but is highly prevalent among prisoners and associated with homelessness and psychiatric hospitalization over the lifespan (Coid et al., 2009).

As a formal construct in psychiatry, psychopathy has a history dating back several decades to the work of Cleckley (1944). According to Cleckley (1976), however, this type of personality problem has been recognized for about 2500 years. In recent years, increasing attention has been paid to psychopathy by mental health professionals, especially those working in forensic settings, because of its association with criminality and violence (Salekin et al., 1996; Hart & Hare, 1997; Hemphill, Hare, & Wong, 1998; Hare, Cooke, & Hart, 1999). Indeed, the association between psychopathy and antisocial or socially deviant behaviour has been recognized in psychopathology for almost two centuries (Berrios, 1996, p. 428).

Hare (2003) estimated that 15% to 20% of all prisoners in countries like the U.K. or U.S. have psychopathy and that these individuals account for a large proportion of

serious crimes involving violence, with high risk for general criminal recidivism associated with the poorest prospects for rehabilitation (Hart & Hare, 1997). Moreover, Hare claimed that in a population of male prison inmates, from 50% to 80% have antisocial personality disorder and among those with antisocial personality disorder about 15% to 25% have psychopathy (Hare, 2003).

Psychopathy has been described as perhaps the most important clinical construct in the criminal justice system (Hare, 1999) and has important implications for sentencing, diversion, placement, treatment options, and assessment for risk and recidivism (Simourd & Hogue, 2000; Edens et al, 2004; Hervé et al, 2004; Hildebrand et al, 2004). Meanwhile, there is accumulating data and clinical experience attesting to the difficulty that clinicians face in attempting to make the diagnosis of psychopathy due to its inconsistent clinical manifestations and the subjective nature of information concerning mental health problems and related behaviours in correctional settings (Hare, 1980; Harris, Rice, & Cormier, 1991). In response to the difficulty in conducting a reliable assessment, several research groups have focused on the development of instruments that can help to measure psychopathy.

Cleckley (1944) was the first to look extensively at the personality traits of psychopathy. Hare extended Cleckley's ideas to develop the Hare Psychopathy Checklist and its revised version (PCL-R), as a standardized clinical measure of psychopathy (Hare, 1980, 1991, 2003). These measures have become widely accepted as international standards for the assessment of psychopathy (Acheson, 2005; Cooke et al, 2007). The PCL-R has been subjected to numerous studies among male prisoners and forensic psychiatric patients and has shown high internal consistency and reliability (Cooke, 1989;

Hare, 1991). Indeed, in highlighting the importance of the PCL-R in mental health and justice, Bolt, Hare & Newman (2007) wrote: “More than most psychological instruments, the PCL-R has been subject to intense clinical scrutiny, in large part because of the key role it plays in a variety of criminal justice contexts, including risk assessment, release decisions, dangerous offender and sexually violent predator determinations, death penalty hearings, evaluation of treatment suitability, and so forth.” (p 45). For these reasons, several studies have now examined the psychometric properties of the PCL-R across diverse populations and have generally confirmed the theoretical and clinical importance of psychopathy and the usefulness of the PCL-R (Salekin, Rogers & Sewell, 1997; Windle & Dumenci, 1999; Cooke & Michie, 1999; Bolt, Hare, Vitale & Newman, 2004; Cooke, Michie, Hart & Clark, 2005a, 2005b; Hare & Neumann, 2005).

However, there are many aspects of the concept of psychopathy that still require clarification including the existence of variants or subtypes of psychopathy (Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003; Brinkley, Newman, Widiger, & Lynam, 2004) and, the applicability of the construct of psychopathy and its measures across sex and ethnic groups (Cale & Lilienfeld, 2002; Skeem, Edens, Camp, & Colwell, 2004). Most research on psychopathy has focused on samples of North American male prisoners selected from high and medium secure institutions (Hare, 2003). This makes the generalisability of findings from these studies uncertain (Coid et al., 2009). In particular, most of the normative data available regarding the PCL and PCL-R are derived from research conducted with North American prison populations.

It has been demonstrated that culture has an influence on the development and expression of personality traits (McCrae, Costa, & Ostendorf et al., 2000). Therefore,

culture may contribute to the occurrence of personality disorders as well as to the appearance of specific symptoms (McCord & McCord, 1964; Alarcon & Foulks, 1995a,b; Paris, 1997). Cultural differences may also contribute to difficulties in clinical assessment including misdiagnoses as a result of cross-cultural problems in the psychometric equivalence of measures (Gregory, 1996; Kanjee, 2001). Unfortunately, cross-cultural studies of psychopathy are limited and the majority of the existing research examining cross-cultural issues with the PCL-R, has been conducted in North America and in European nations. As yet, there are few studies in non-European settings, including Sub-Saharan Africa (Heine & Buchtel, 2009; McGilloway et al., 2010), and there has been no study at all in the Democratic Republic of Congo (DRC).

The DRC is of interest not only because it represents a very different cultural context than North America or Europe, but also because it is an environment in which violence is endemic, since it has been at war since its independence in 1960. Assessing psychopathy in this type of social context may be particularly difficult. Insofar as instruments assess experiences of or attitudes toward violence as one marker of psychopathy, the presence of such widespread violence may influence the meaning and measurement of psychopathy as an individual personality trait.

1.1. The Democratic Republic of Congo: A Post-crisis Setting

The Democratic Republic of Congo (DRC), formerly called Zaire, was a Belgian colony until June 30, 1960, the date of its independence. It is located in Central Africa between the Central African Republic and Sudan to the north, Uganda, Rwanda and Burundi to the east, Zambia and Angola in the south, and the Republic of Congo to the

west. The DRC is separated from Tanzania by Lake Tanganyika to the east. The country occupies an area of 2,345,408 km², which is larger than that occupied by Spain, France, Germany, Sweden and Norway combined. The DRC is divided into 11 provinces, each with a provincial headquarters. The population is currently estimated at over 66 million inhabitants, including 600,000 Pygmies, the indigenous people of the DRC. The life expectancy at birth is 46 years for men and 49 for women, and there are around 350 ethnic groups. The largest groups are Kongo, Luba, and Mongo with 700 local languages and dialects. Apart from French, which constitutes the official language, the four most commonly spoken languages are Ligala, Kongo, Swahili and Tshiluba. 80% of the population are Christian, 10% Muslim and 10% of traditional beliefs and sect practice (Central Intelligence Agency, 2008).

Despite its vast natural resources (cobalt, copper, diamonds, gold, coltan, uranium, oil, etc.), the economy of the DRC has greatly declined due to armed conflicts associated with corruption, poverty, and poor health conditions. Since its independence, those factors have been the cause of great human suffering in the DRC (Coughlan et al., 2006; Human Rights Watch, 2007; Regional Information Network, 2009; Okitapoy et al., 2010).

Humans rights violations were perpetrated by both rebel groups and government forces with widespread rape and sexual exploitation of women and girls, torture and illegal detention. According to Amnesty International, the government has made progress since 2003 in advancing the rule of law and respect that are essential to securing human rights and peace (Amnesty International, 2007).

As the general population of the DRC have experienced extreme violence over many decades, it is likely that many or most of the inmates included in this study were born and brought up under violent conditions due to armed conflicts. This might be expected to increase the level of psychopathy. Examining this, however, would require a cross-culturally valid measure of psychopathy.

1.2 The Impact of Childhood Exposure to Trauma in War and Conflict Situations

The 20th century has been the bloodiest in the history of humanity. The total number of people killed since 1900 in various armed conflicts is estimated at 262 million and only 16 out of 193 countries in the world are not currently affected by armed conflict (Baum, 2008, p. 9). Moreover, the proportion of civilian war casualties has jumped dramatically from 5 % to more than 90 % (Machel, 2000; Garbarino, 2001).

Children have been profoundly affected by these conflicts. Contemporary conflicts are particularly lethal for children because they make little distinction between combatants and civilians, young people and adults. Thus, in the 1990s, more than two million children died as a result of armed conflict and about 6 million were seriously injured or disabled (UNICEF, 2000). Approximately 20 million children were separated from their families, and are either refugees or internally displaced persons (UNICEF, 2000). More than 300,000 children under 18, including children as young as 6 years of age, have been used in these hostilities as soldiers (Brett, 2000; Scherrer, 2002; Pearn, 2003). These child soldiers are marginalized from the society and this can impact on their mental health. In addition to their involvement as soldiers, children are often victims of armed conflicts around the world in which they are deliberately targeted or used as

human shields. The traumatic events that children are exposed may be increased by war and conflict include physical assault and/or sexual abuse, accidental or natural disasters, acts of terrorism or war, physical illness, and medical procedures (Bailly, 2003; Baubet et al., 2003; Lachal et al., 2003). As consequence of these events, many children suffer serious traumatic consequences including amputation of limbs or feet by land mines, blindness, deafness, head injuries, and PTSD. Moreover, a large proportion of children who survive of these various atrocities, may suffer from enduring physical or mental complications (Farhood et al., 1993).

Faced with this history of war and mass violence, mental health practitioners might expect an elevated prevalence of posttraumatic stress disorder. However, exposure to violence also may be associated with other forms of psychopathology. In particular, childhood trauma exposures may have lasting effects on the development of personality. Many studies on children exposed to war and other disasters have highlighted fear as response to a traumatic experience along with aggressive or regressive behaviors (Pearn, 2003). There is also the possibility that conduct disorders, antisocial behaviour and underlying traits of psychopathy may be among the long-term consequences of child early exposure to violence of armed conflict.

Victimization in childhood has been associated with various forms of maladjustment, including behavioral disorders, aggression and antisocial behavior (Weiler & Widom, 1996). A link between child abuse and violent behavior in adolescence or adulthood has been well recognized (Lang, 2002). Some studies suggest that childhood victimization and adverse social conditions may be important etiological factors for later conduct disorder or psychopathy (Land et al., 2002). For example, Weiler

and Widon (1996) found that victimized children had significantly higher ratings on a measure of psychopathy (the PCL-R) than did controls. They suggested that psychopathy may act as mediator between child victimization and later violent behaviour among some individuals.

While aggression and violence can be seen as a response to current social contexts, it may also reflect longer term developmental effects of life stresses such as war, domestic violence, poverty, education, abuse of any kind, and unpredictability in everyday life (Chiland & Young, 1944; Raine, 1996). For example, Lang et al. (2002) carried out a longitudinal study on 287 boys aged 11 to 14 years from an urban environment in Sweden, seen in 1959 and 1963 and followed-up in 1980 and 1990. Psychopathy Checklist (PCL) scores were higher in the group at high risk of victimization than in the control group. This longitudinal study is consistent with other retrospective studies that show that adults with psychopathy are more likely to have been abused and neglected in childhood than those from low risk of victimization (Lang, et al., 2002).

Different forms of childhood adversity may interest to increase the risk of psychopathy. In addition to abuse, disruptions of family and kinship may increase the risk of psychopathy. For example, Campbell et al. (2004) found that adolescents with psychopathy are more likely to have experienced placement in a foster family. Gao et al. (2010) examined the relationship between maternal and paternal relationships, physical abuse during childhood and psychopathy, at the age of 28 years in a community sample of 333 participants (203 men and 130 women), chosen at random from a larger sample of 1795 children from Mauritius. The results indicate that low levels of parental attachment

(lack of maternal care and paternal overprotection) and physical abuse in children were both associated with psychopathic personality traits. Parental relationships were significantly associated with psychopathic personality and children separated from their parents during the first 3 years of life were particularly likely to display psychopathic personality in adulthood. Deficiency of maternal care was associated with high psychopathy and emotional detachment and factors related to deviant behavior. Low paternal overprotection was associated with high psychopathy and emotional detachment factor, but not deviant behavior.

Taken together, this work suggests that childhood exposure to violence, abuse and disruption of the family environment can all increase the risk for psychopathy in adulthood. Situations of war and mass violence with the associated disruption of families and communities might therefore be expected to increase the prevalence of psychopathy. However, research on this potential link depends on having reliable measures of psychopathy that are valid across cultures.

All the above constitutes the basis and motivation to undertake this first study that will be completed by further work to refine and validate the PCL-R in the Democratic Republic of Congo.

1.3. Study Objectives

The present study examined the use of the Psychopathy Checklist-Revised (PCL-R) in the process of diagnosis of psychopathy in the Democratic Republic of Congo. The main objectives of the study were as follows:

1. To test the cross-cultural validity of the PCL-R instrument among male prison inmates in the Democratic Republic of Congo;
2. To compare the psychometric properties of the instrument in this setting to that found in North America and elsewhere;
3. To examine the relationships between the PCL-R scores, sociodemographics and criminal history background.

CHAPTER 2: LITERATURE REVIEW

2.1. Psychopathy Across Cultures: History & Background

There is an abundant literature on psychopathy that outlines the history of the construct (Cleckley, 1941, 1959, 1982; Maughs, 1941; Gurvitz, 1951; Mc Cord & McCord, 1964; Craft, 1965; Pichot, 1978; Pascalis, 1980; Ernst, 1995; Mc Cord, 1982; Sass & Herpertz, 1995 Millon, 1996; Pham & Côté, 2000). A careful review of this literature, particularly that of the nineteenth and twentieth centuries, shows a certain similarity in the description of the individuals labeled “morally insane” (Pritchard, 1835), later called “unbalanced” (Morel, 1857, pp. 321-391; Dupré, 1925, pp. 483-501). Magnan and Legrain (1895) used the term “psychopathic states” to designate any mental disorders, but the term “psychopaths” was given something close to its contemporary meaning by Cleckley in 1941. However, attempts to apply the construct of psychopathy across cultures and or historical eras have struggled from the outset with questions about its pathological nature. Indeed, it was difficult to include among the mentally ill, people whose behaviour was so socially disturbing but whose thought processes were generally preserved. This difficulty has often been the cause of marked differences of opinion, controversy and contradictions in the use of concept of psychopathy. A brief historical review of the development of the construct of psychopathy is necessary to better understand the current areas of divergence and consensus.

The history of psychopathy coincides with the beginning of psychiatry as a medical speciality and with the birth of criminology (Shorter, 1997; Senon, 1998). One of the first references to the concept of psychopathy goes back to the early nineteenth

century with the French psychiatrist Pinel the father of psychiatric semiology (Smith, 1978). Pinel is thus the father of contemporary psychiatric semiology who described In his Treatise of 1801, Pinel described psychopathy as part of "mania without delirium," a "rational madness" characterized by periodic attacks of blind impulses to acts of violence, without intellectual or perceptual impairment:

“Elle est continue, ou marquée par des accès périodiques. Nulle altération sensible dans les fonctions de l’entendement, la perception, le jugement, l’imagination, la mémoire, etc.: mais perversion dans les fonctions affectives, impulsion aveugle à des actes de violence, ou même d’une fureur sanguinaire, sans qu’on puisse assigner aucune idée dominante, aucune illusion de l’imagination qui soit la cause déterminante de ces funestes penchants [sic]. ” (Pinel, 1801, p. 155).

Pinel advocated moral treatment rather than the harsh interventions (e.g., bloodletting, cold baths) used at that time to treat people suffering from mental illnesses (Pinel, 1801). He observed that the patients who he labeled psychopaths, exhibited impulsive acts, episodes of extreme violence, and self-harm (Davies et al., 1981; Millon et al., 1998). This category of patients showed no signs of psychosis (as recognized at that time), and their ability to reason was not disrupted. Pinel described their aggressive behaviour as ‘mania without delirium’ (Dinges et al. 1998; Millon et al., 1998). However, his observations met with much controversy before being accepted by scientific community at the time, as the disturbance of intellectual functions and symptoms of psychosis were considered as specific criteria for mental illness (Stevens, 1993).

In 1857, Morel employed the term “degeneration” and linked it to antisocial behaviour (Pham & Côté, 2000). Degeneration implied a loss of higher mental faculties. He described degenerates as being without morals, which led them to commit acts that were an affront to morals. In France, Morel and later Magnan and Legrain in 1895 and Dupré in 1925, saw in psychopathic illness proof of the theory of degeneration in which both the environment and heredity played a role.

In his treatise of 1838, Esquirol, a student of Pinel, developed the concept of "monomania". Some of the types of "reasoning monomania" described in his treatise were very close to psychopathy. Through the concept of "reasoning monomania," Esquirol described a ‘perversion’ focusing essentially on affective functions, while the functions related to judgement, memory and perception remained intact.

In England in 1835, Pritchard used the term “moral insanity” to highlight the “perverted” nature of the moral values of some people with antisocial behaviour. In a manner similar to Esquirol, Pritchard focused on the damage to feelings rather than intellectual functions, and noted a perversion of moral principles, control and honesty in the subjects concerned. However, his definition of moral insanity was very broad, encompassing virtually all mental disorders, excluding only intellectual deficiency and schizophrenia (McCord, 1982; Millon & Davis, 1996). Meanwhile, Pritchard distinguished moral causes, such as education, and physical causes in the origin of the condition, which included a hereditary basis as well as a role played by “passions” and “tempers”. In London, Maudsley (1884) described the concept of a congenital deficiency in criminal recidivists. This concept would be included in the precursor concept of psychopathic disorder known as “moral imbecility”. The idea of explaining the

functioning of the criminal recidivist based on degeneration implicitly assumed that the individual could be held accountable because of his congenital deficiency. The concept of “moral imbecility” was registered in Great Britain in the Mental Deficiency Act of 1913 (Simmons, 1978), and it was later reproduced in the English Mental Health Act under the term of “psychopathic disorder”. This syndrome was described as a persistent disorder or disability of mind which gives rise to abnormally aggressive or seriously irresponsible conduct (Blackburn, 1993). However, the recognition of a congenital component in antisocial functioning did not lead all clinicians to accept the non-responsibility of the individual with moral imbecility.

In 1891, Koch introduced the expression “psychopathic inferiority”, which Kraepelin would later replace with the term “psychopathic personality” in 1925. Theories of degeneration were debated, especially in the work of Schneider, a student of Kraepelin. Schneider (1958, p. 23) discussed psychopathy from a constitutionalist perspective, which broke with the anatomical dimension of the French school of degeneration, as follows: “born criminal... the excitable, shiftless, impulsive types, the liars, swindlers, antisocial and troublemaking types”. However, in the seventh edition of his treatise, Schneider moved away from the degeneration theory of psychopathy to characterize psychopathic personality as a lack of morality and sense of responsibility associated with untruthfulness, fraudulence and superficial charm (Millon & Davis, 1996). These criteria correspond to some aspects of psychopathy as later described by Hare (1991). However, Schneider’s main contribution was to separate psychopathy from the schizophrenic psychoses (Senon, 1998).

Subsequently, the terms psychopathy, sociopathy and antisocial personality, to name just a few, were used successively. There was no consensus on the criteria and terms to use when designating or identifying psychopaths. In 1941, Cleckley made a decisive contribution to the definition of psychopathy. Cleckley focused on describing the antisocial dimensions of behaviour; that is, how pathological behaviour would be described based on the criteria for an individual's ability to adapt to the social group in which he operates. Cleckley based the notion of a psychopathic criminal orientation on a set of psychological and social characteristics that could define it and determine its intensity. According to Cleckley, these characteristics constituted a specific syndrome, which has an autonomous existence that was not the consequence of another disease. In his book "*The Mask of Sanity*", Cleckley (1941) presented a series of clinical observations of his patients and described the characteristic personality traits and behaviours of psychopaths. Hart and Hare (1997) summarize Cleckley's description as follows:

"Interpersonally, psychopaths are grandiose, arrogant, callous, superficial, and manipulative; affectively, they are short-tempered, unable to form strong emotional bonds with others, and lacking in empathy, guilt or remorse; and behaviorally, they are irresponsible, impulsive, and prone to violate social and legal norms and expectations" (pp. 22-23).

Cleckley introduced sixteen behavioural characteristics of psychopaths and these characteristics form the basis for the psychopathy scale used today (Hare, 1985, 1991). However, a lack of consensus on the concept of psychopathy was reflected in the first edition of the Diagnostic and Statistical Manual of Mental

Disorders (DSM-I) of the American Psychiatric Association (APA, 1952). The first DSM replaced the concept of psychopathic personality with that of sociopathic personality. This concept, though largely based on the work of Cleckley, nevertheless omitted several features, especially with regard to manipulation and lack of remorse or guilt. The subsequent versions of the DSM (APA, 1968, 1980, 1987) referred to “antisocial personality disorder” to describe individuals with criminal and antisocial behaviour. The DSM-II (APA, 1968) described them as individuals who are selfish and insensitive, irresponsible and who have difficulty feeling guilt.; This definition was designed to harmonize with World Health Organization terminology based on a clinical approach (Pham & Côté, 2000). However, with the DSM-II definition, it was easy to give inconsistent diagnostic interpretations due to the lack of clear operational criteria, an issue noted by researchers during a NATO Advanced Study Institute meeting in 1975 (Hare & Cox, 1978). Within the DSM-II definition, three different categories of individuals were described: “primary” psychopaths, similar to those described by Cleckley; “secondary” psychopaths, showing some emotion; and “delinquents”, who had potentially normal emotional response but adapted to their social environment through their delinquency.

The publication of DSM-III (APA, 1980) marked a decisive turning point in the way of defining the antisocial personality. The DSM-III provided more specific criteria for antisocial personality including: the age of the individuals involved (over 18 years); the appearance of behavioural disorders before age 15; maintenance of at least 3 of the 12 symptoms of antisocial behaviour since the age of 15; and the exclusion of schizophrenic

or manic disorders. Considering the variable outcome of adolescent delinquency, the notion of “antisocial personality” was reserved for adults. In adolescents, there was more talk of “behavioural disorders including conduct disorder”. In addition to the above criteria, the subsequent revision of DSM-III, DSM-III-R (APA, 1987), added only one item, the lack of remorse or guilt. As we have noted, from DSM-III onward, the diagnosis of antisocial personality has been based on a purely behavioural conceptualization. Most diagnostic criteria are defined in terms of behaviour and personality traits are relatively neglected. It is likely that the utility of an instrument based primarily on behavioural criteria will be greatly affected by contextual or situational factors that influence the meaning and likelihood of specific behaviours. Moreover, diagnosis based primarily on individuals’ verbal reports may be inaccurate; this may be especially important in the case of antisocial personality both because of the socially undesirable nature of the relevant behaviours and because lying itself is one of the criteria for antisocial personality disorder.

To address the limitations of the DSM focus on defining antisocial personality disorder primarily in terms of behavioural criteria, Hare and his colleagues (1980, 1985, 1991) developed a diagnostic tool for psychopathy that included assessment of personality traits. This work resulted in a reliable and valid measure, known as the Hare Psychopathy Checklist (PCL).

According to the PCL, psychopathy involves both behavioural and personality traits. Factor 1 of the PCL thus refers to personality traits and consists of the following items: “glibness/superficial charm,” “conning/manipulation,” “lack of remorse or guilt,” “shallow affect”, “callousness/lack of empathy” and “failure to take responsibility for

one's actions.” PCL Factor 2 refers more to antisocial behaviours and consists of the following items: “need for stimulation/proneness to boredom”, “parasitic lifestyle,” “poor behavioural control,” “early behavioural problems”, “lack of realistic, long-term goals”, “impulsiveness”, “juvenile delinquency” and “revocation of conditional release” (Item 19). According to Hare (2003), “Item 19 describes an individual who, as an adult (aged 18 or older), has violated a conditional release or escaped from an institution. Violation of conditional release include technical but noncriminal breaches (i.e., drinking alcohol while on parole), or news charges or conviction while parole, mandatory supervision, probation, bail...Escapes from institution.....(p. 45)”

DSM-IV (APA, 1994) provides seven criteria for a diagnosis of antisocial personality, only one of which refers to personality traits as such, i.e. the lack of remorse. The difference between DSM-IV and the PCL in the definition of criteria for antisocial personality therefore is quite significant and is reflected in prevalence rates. In the United States prison population, the prevalence of antisocial personality disorder as measured by DSM-IV criteria is about 60 to 65%, while psychopathy as measured by the PCL has a prevalence of about 25% (Bertrand, 1997).

While the two concepts are distinct (Steuerwald & Kosson, 2000; Pham & Côté, 2000), there is a clear connection between antisocial personality and psychopathy, both conceptually (Lyon & Ogloff, 2000) and empirically (Harris et al., 1994). Although not included in the ICD (International Classification of Diseases of the World Health Organization) or DSM (Diagnostic and Statistical Manual of Mental Disorders of American Psychiatric Association) classifications, analyses of traits associated with personality disorders reveal a dimension remarkably similar to the personality features

that constitute psychopathy (Blackburn & Coid, 1998; Ulrich & Marneros, 2004). Indeed, the underlying personality features are dominated by impulsive, dissocial, paranoid, histrionic and borderline dimensions according to the ICD classification. For DSM, the features are dominated by paranoid, histrionic, narcissistic, borderline, and passive aggressive dimensions. Moreover, the International Classification of Mental Disorders and Behavioural Disorders, Tenth Revision (ICD-10) (WHO, 1994), described a similar construct, the dyssocial personality disorder, showing a gross disparity between behaviour and the prevailing social norms as follows: callous unconcern for feelings of others; low tolerance for frustration; gross and persistent attitude of irresponsibility and disregard for social norms, rules, and obligations; incapacity to experience guilt and to profit from experience; incapacity to maintain enduring relationships, and marked proneness to blame others, or to offer plausible rationalization for behaviours.

In summary, despite much research on various aspects of psychopathy, the history of the concept of psychopathy has been marked by uncertainty and controversy among clinicians and researchers on its definition and diagnostic criteria (Gurvitz, 1951; Jenkins, 1960; Arrigo & Shipley, 2001). Researchers have given priority to the development of precise inclusion criteria to define homogeneous groups while clinicians have been more interested in developing clear methods for the diagnosis of psychopathy (Arrigo & Shipley, 2001). However, there is a consensus among authorities from different theoretical orientations that the concept of psychopathy describes a distinct entity among personality disorders (Harris, Rice & Quinsey, 1994; Harris, Skilling & Rice, 2001; Edens, Marcus, Lilienfeld & Poythress, 2006). Indeed, in considering a cluster of personality traits (Factor 1 on the PCL), in addition to the presence of antisocial

behaviour (Factor 2), the scale of psychopathy developed by Hare identifies a group of subjects with specific characteristics. While the diagnosis of antisocial personality according to (DSM), made almost exclusively on the basis of antisocial behaviours, is observed among 28 to 62% of incarcerated peoples (Neighbors et al., 1987; Collins, Schlenger, & Jordan, 1988; Hodgins & Côté, 1990; Abram, 1990; Robins & Tipp, & Prxybeck, 1991; Motiuk & Porporino, 1992; Bland, Newman, Thompson & Dyck, 1998), the construct of psychopathy identifies a smaller group of individuals with distinctive personality traits that may contribute to their antisocial behaviour.

2.2. Measuring Psychopathy

The MMPI Pd Scale

The first measure of psychopathy developed in clinical populations was the psychopathic deviate (Pd) scale of the Minnesota Multiphasic Personality Inventory (MMPI; McKinley & Hathaway, 1944). The 50 items on the Pd scale were empirically derived based on responses to the MMPI from a group of young offenders (aged 17 to 22 years) who had a history of delinquency (Greene, 1980). The scale includes items tapping boredom susceptibility, social alienation, complaints about authority figures, and arrogance (Greene, 1980). Validation by McKinley and Hathaway (1944) revealed that the Pd scale was able to identify about half of those already diagnosed as clinical psychopaths.

However, the MMPI Psychopathic Deviate scale (Pd), like other self-report psychopathy scales, appears not to assess the basic personality traits of psychopathy as

defined by Cleckley (Blonigen, 2003). The Pd scale is considered not useful in understanding the clinical psychopathy because it is fundamentally correlated only with the facet “antisocial deviance” (Factor 2) of the PCL-R, and not with the “affective-interpersonal” facet (Factor 1) (Hare & Cox, 1978; Lilienfeld & Andrews, 1996).

The Hare Psychopathy Checklist (PCL)

Aside from Cleckley’s (1941-1982) initial work, the most influential model of clinical psychopathy has been that of Robert Hare. Mapping largely onto Cleckley’s criteria, Hare’s original model (1991) proposed a two-factor structure of clinical psychopathy. The first was a personality factor consisting of lack of guilt and the exploitation of others. The second was a behavioural factor representing social deviance (Harpur, Hare & Hakstian, 1989). Hare’s most recent model of clinical psychopathy (2003b) is a two-factor, four-facet model. In this model, the personality factor breaks down into *interpersonal* (e.g., charming, lying) and *affective* facets (e.g., shallow affect, lack of empathy). Similarly, the behavioural factor breaks down into *parasitic lifestyle* (e.g., impulsivity, irresponsibility) and *antisocial behaviour* facets (e.g., frequency and diversity of antisocial behaviour). This combination of callous emotionality and deviant behaviour has been argued to be particularly dangerous. Indeed, studies have shown that by comparing the non-psychopathic inmates adolescents and young psychopaths, psychopaths commit more violent and nonviolent crimes (Toupin et al. 1996). In addition, youth who exhibit behavioral problems associated with callous, unemotional traits, that constitute the affective component of psychopathy (Hare, 1991), are more likely to present serious antisocial behavior in comparison with those of conduct

problems without callous, unemotional features (Christian et al., 1997; Andershed et al., 2002).

Although the proposed factor structure has changed somewhat over time, the measure used to assess clinical psychopathy, the Psychopathy Checklist-Revised (PCL-R), has remained stable (Hare, 1991; 2003b). The PCL-R is conducted as a semi-structured interview with additional information provided by case history files. Trained raters evaluate the subject on such items as charm, lying, callousness, impulsivity, irresponsibility, promiscuity, and diversity of offences committed. PCL-R total scores can range from 0 to 40 and represents the extent to which a person matches the prototypical person with psychopathy. Although the total scores are dimensional, they can be used to provide a categorical diagnosis of psychopathy. A cut-off of 30 has proven useful for this purpose in many settings (Hare, 1991). While Hare (1991) recognizes that there is no simple and fully satisfactory method to establish the cut-off point to define psychopathic functioning, the cut-off point of 30 allows the best classification of subjects in his samples. Indeed, the psychopathy is considered in taxonomic terms to identify a specific group (Harris, Rice & Quinsey, 1994), it is important to determine critical values that can distinguish groups of psychopaths and non-psychopaths (Hare, 1991).

The validity of the PCL-R has received a great deal of empirical support and it has become the 'gold standard' of clinical psychopathy assessment (Cooke & Michie, 2001). The affective component of clinical psychopathy has been validated using various neurophysiological (Kiehl et al., 2001; Blair, 2003) and interpersonal measures (Kosson et al., 2000). The PCL-R has also been mapped onto the Five-Factor Model of personality (Costa & McCrae, 1992). More specifically, high scores on the PCL-R correlate with

disagreeableness and low conscientiousness (Harpur, Hart & Hare, 2002). PCL-R scores have also proven particularly valuable in predicting antisocial behaviour (Hart & Hare, 1997). For example, PCL-R scores have shown consistently strong associations with recidivism (Hemphill, Hare & Wong, 1998), substance use (Hemphill, Hart & Hare, 1994), violence (Serin, 1991; Heilbrun et al., 1998), and number of offences committed (Hart & Hare, 1997). There are now multiple versions of the PCL including: PCL-Youth Version (Forth, Kosson & Hare, 2003); PCL-Screening Version (Hart, Cox & Hare, 1995); Business-Scan (Babiak & Hare, in development); and the P-SCAN Research and Checklist Versions (Hare & Herve, 1999).

In summary, the Hare Psychopathy Checklist Revised (PCL-R) is currently recognized as a valid and reliable method for assessing psychopathy in male forensic populations. However, most research involving the PCL-R has been done with North American populations. The above review of literature shows that many aspects of psychopathy, including the validation of PCL-R, remain to be elucidated through research across cultures and ethnic groups.

2.3. Prevalence of Psychopathy

Prevalence of psychopathy in the general population

Although psychopathy was described by Cleckley in 1941 in relation to criminal behaviour, the concept of the "successful psychopath" or non-criminal psychopath has always remained a central concern of researchers and clinicians (Widom, 1977; Smith, 1978). Recent literature indicates that psychopathy is not only limited to the prison population, or among those engaged in chronic criminal activities (Hare, 1993; Lykken,

1995; Babiak & Hare , 2006, Hall & Benning, 2006). Psychopathy can therefore be found in the general population and among individuals at all levels of society including businessmen, politicians, journalists, lawyers, etc. Through their intelligence and socioeconomic status, individuals with psychopathy can exploit their relationships with others, including friends, colleagues, and family members, without falling into criminality (Hare, 1993; Zagon & Jackson, 1994). Moreover, some features of psychopathy, such as glibness/superficial charm and fearless, can even be beneficial in certain professions (Lykken, 1995). In a longitudinal study based on observation in a professional environment, Babiak (1995, 2000) described how individuals with psychopathy function in a business community using lies and manipulation. Such individuals may be particularly attracted to unstable companies or those in transition, so that they can exploit the chaos that exists, in order to benefit themselves at the expense of colleagues (Babiak, 2000).

Most research on psychopathy has focused on samples of male inmates (Hare, 2003). This makes it difficult to generalize results to other criminal or non-criminal populations, including those residing in the community. The prevalence of psychopathy, in the general population is estimated at 1% (Hare, 2003). Community studies of individuals with psychopathy can help clarify the factors that protect them from criminal or other chronic antisocial activities, and can guide development of appropriate prevention strategies.

Prevalence of psychopathy among incarcerated male offenders

Hare (1991) estimated the prevalence rate among male prisoners between 20% and 30%, while Hart and Hare (1998) revised that estimate to between 15% and 30%. In 2003, however, other studies in other Western countries suggest that the prevalence rate of psychopathy among incarcerated male offenders may vary more widely between 3% (Cooke, 1955) and 39.2% (Hare et al., 1988), for example: Scotland (3%); Belgium (7.8%); Denmark (17%); Sweden (25%); Norway (25.3%); North America (28.4%) (Pham & Côté, 2000, pp. 54-65). This variations may reflect cross-national differences in criminal justice systems as well as broader societal factors.

The PCL-R was developed and largely used in North America. As its popularity has increased in forensic psychiatry, reports from other countries have appeared, including Scotland, England, Portugal, Spain, Germany, Belgium, Denmark, Norway, Sweden and Finland (Cooke, 1998). In general, these studies find significantly lower rates of psychopathy, compared with those in the United States and Canada (Cooke, 1998; Cooke, Hart, & Michie, 2004; Dahle, 2006). Several studies have been conducted to attempt to explain the difference in prevalence rates of psychopathy between North America and Europe. However, it is important to note that the few studies conducted in Europe before 1999 using the PCL-R may have found low rates because the psychopathy scores were based solely on data collected in the files, without using the structured interview as advocated by Hare (Pham & Côté, 2000). This methodological difference likely contributes to the apparent reduced prevalence rates of psychopathy (Wong, 1984). Indeed, the evaluation of some items on the Hare Psychopathy Checklist requires direct observation of the subject. This applies particularly to items on glibness/superficial charm

(Item 1), grandiose sense of self-worth (Item 2) and pathological lying (Item 4). Nonetheless, most studies on psychopathy are in agreement with Hart and Hare (1998), placing the prevalence of psychopathy among incarcerated offenders between 15% and 30% (Kosson et al., 1990; Serin, Peters, & Barbaree, 1990; Hare, 1991; Andersen et al., 1966; Côté & Hodgins, 1996). Researchers have noted other differences in methodology that may account for the difference in prevalence between North America and Europe. These include: the sample population; security level of the prison; gender; justice system; associated psychopathology; and cultural background of inmate which may influence the sensitivity of the PCL-R items. All of these factors are likely to influence measurement of the prevalence rate of psychopathy among male inmates (Pham & Côté, 2000; Scholderer et al., 2005; Mooradian & Swan, 2006). Potential gender and culture bias will be discussed further in specific sections of this study.

Research on psychopathy in North America has almost exclusively focused on sample populations consisting of male inmates in high and medium security prisons (Hare, 2003). These institutions are, of course, intended to receive prisoners with serious criminal behavior and this can explain the high rate of psychopathy found in North America compared to the other regions of the world (Coid, 1998). This explanation is also suggested by the difference in prevalence rates of psychopathy found in a study conducted by Hart et al. (1994) comparing a sample of federal inmates in a medium security correctional institution (with a psychopathy rate of 34.0%), and a sample of federal inmates from different prisons (with a rate of 17.9%).

Cooke (1998) argued that migration plays a role in the high prevalence rates of psychopathy in certain settings. People with psychopathy may be attracted to the

individualistic cultures and opportunities typically found in urban environments. They may preferentially migrate to urban centers, where relationships between neighbors tend to be more superficial, which facilitates predatory and exploitative behaviour. As Cooke (1998) put it, “psychopaths migrate to avoid becoming visible.” (Of course, it could be also simply that psychopaths with prior convictions preferentially move to urban settings to try to start a new life because there are more resources for re-integration). To test this theory of preferential migration, Cooke and Michie (1999) conducted a study on a sample of Scottish prisoners. They found that compared to prisoners from Scotland, that people with one or more previous convictions in England and Wales had a higher rate of psychopathy. This finding is consistent with the idea that psychopaths tend to migrate and thus possibly increase the prevalence rates of psychopathy in urban settings (Wernke & Huss, 2008).

Differential rates of imprisonment may also affect rates of psychopathy observed in prison populations. The prison population of the United States is estimated at 2 million inmates, with an incarceration rate of 702 prisoners per 100,000 inhabitants (Mauer, 2003). European countries tend to have incarceration rates much lower than those in the United States according to The European Sourcebook (2003). Only Russia and Belarus imprison more than 500 persons per 100,000 inhabitants. While the United States has a prison system with a capacity of 1,951,650, England has a capacity of 69,528 and Scotland, only 6538. These figures show an enormous difference between the United States and European countries in the ratio of prison capacity to population. Indeed, high rates of crime and policy changes in the judicial system have had a significant impact on increasing the prison population in the United States. The United States is much stricter

and the American justice system imposes penalties far more severe than many other countries in the world. This concerns particularly crimes against property, drug offenses and sexual assaults (Mauer, 2003). In addition, the United States seems to focus more specifically on the punishment, by investing heavily in prison, while the European countries are more concentrated over the rehabilitation and crime prevention. According to the United States Department of Justice (1998), “not only do incarceration rates differ in general, data have shown that the United States is more likely to incarcerate criminals for crimes that are disproportionately committed by psychopaths, comparing the United States and England. If a psychopath is more likely to commit certain crimes, and a nation’s legal system is more likely to incarcerate criminals who have committed those particular crimes, it can be theorized that that particular nation would show an exaggerated rate of psychopathy in its prison population” (Wernke & Huss, 2008, pp. 233-234). Indeed, the United States is more likely to incarcerate criminal for certain types of crimes that are disproportionately committed by people with psychopathy, for example: crimes against property, drug offenses and sexual assaults (Mauer, 2003). This can explain the difference of the prevalence rate of psychopathy between the United Nations and Europe. In Europe, people with psychopathy are likely to escape the prison system because of lighter sentences that are imposed on criminals than the United States. An American has a 5% chance of going to federal or state prison (Bonczar & Beck, 1999). As explained by Mauer (2003, p. 10), the “get tough movement” for repeat offenders and “the war on drugs” have greatly contributed to these increased rates of incarceration—both recidivism and drug-related crimes may be more likely to include people with psychopathy. Accordingly, the proportion of people with psychopathy in the prison population in the

United States may be elevated compared to that of England. These differences are due to variations in the judicial system rather than cultural factors per se.

The prevalence rates of psychopathy among sexual offenders varies between 3% and 15% (Serin, Malcolm, Khanna, & Barbaree, 1994; Forth & Korner, 1994; Miller, Geddings, Levenston, & Patrick, 1994; Hart & Hare, 1998; Rochefort & Earls, 1998). However, rates of psychopathy are higher among offenders incarcerated for rape, where the prevalence varies from 35% to 77% (Brown & Forth, 1977; Miller et al, 1994).

Comorbidity

While the diagnosis of antisocial personality disorder is found among a significant number of incarcerated individuals with serious mental disorder, with a prevalence ranging between 39.1% (Côté & Lesage, 1995) and more than 60-70% (Côté & Hodgins, 1990), psychopathy constitutes a distinct clinical entity which has a little overlap with severe and persistent mental disorders (Hart & Hare, 1989; Freese et al, 1996, Hodgins, Côté, & Toupin, 1998). Thus, people with psychopathy constitute a specific group, and not all groups of prisoners exhibit the same prevalence rate of psychopathy.

The literature shows that there is a relationship between the disorders associated with drug and alcohol abuse and antisocial personality disorder (van den Bree, 1998). According to Jessor et al. (1980) and van den Bree et al. (1998), people with substance abuse often have an antisocial personality disorder, and antisocial personality disorder sometimes leads to abuse of substances. The co-occurrence of antisocial personality disorders and the disorders associated with drug and alcohol abuse is the most frequent association in mental health (Straussner et al., 2007). An epidemiological study

conducted in the United States at the national level, by Grant et al. (2004), showed that 14.8% of Americans present at least one antisocial personality disorder according to DSM-IV criteria. Furthermore, 28.6% among those with a disorder related to alcohol abuse and 47.7% among those with a disorder associated with drug abuse have an antisocial personality. According to Regier et al. (1990), 14% of individuals having a disorder associated with alcohol abuse and 18% of those suffering from a disorder of drug abuse have an antisocial personality. In addition, 70% of people with antisocial personality disorder have a disorder associated with alcohol abuse and 30 to 40% have a disorder resulting from drug abuse (Lewis et al., 1983; Regier et al., 1990).

However, although the relationship between disorders associated with alcohol or drug abuse and antisocial personality disorder is established (Nedopil et al., 1995; Knop et al., 1998), the cause of this co-morbidity and its intimate mechanism remains uncertain (Robins, 1998; van den Bree et al., 1998). However, genetic and environmental influences can partially explain the co-occurrence of alcohol and drug abuse, and antisocial personality disorders (Kreek et al., 2005; Button et al., 2006). Further studies are necessary to understand the real nature of this relationship. Ultimately, this will enable the clinician to make a better prognostic evaluation and to assure adequate management of patients with both disorders linked to alcohol and drug abuse, and antisocial personality or psychopathy.

Psychopathy among Female Offenders

Currently, studies show that the prevalence of psychopathy in women is substantially lower than that observed in men. Indeed, Warren and colleagues (2003)

found a prevalence rate of 17% in a sample of U.S. women prisoners while Salekin and colleagues (1997) reported a prevalence of 15% using a similar sample of a U.S. prison. Neary (1990) and Loucks (1995) found a prevalence rate of 11%, and Vitale et al. (2002), 9% in a female sample from a U.S. prison. Thus, the prevalence rates of psychopathy among men are roughly twice that found among than women (Salekin, et al., 1997). These gender differences may reflect broader differences in psychopathology among men and women as well as diagnostic biases.

Indeed, in general, psychiatric epidemiological data show that women have an increased tendency to report internalizing symptoms (depression, anxiety) compared with men who are more likely than women to manifest externalizing symptoms, including substance abuse/dependence, antisocial personality, and aggression (Robins & Regier, 1991; Kessler et al, 1994). However, gender differences in social norms and sanctions for antisocial behaviour may introduce bias into clinical diagnosis (Ford & Widiger, 1989; Hare, 1998, p. 106).

In Canada, the Correctional Service of Canada conducted a study in which they found that 20% of male inmates had a PCL-R score over 30 (Hare, 1998). Using the same cut-off score of 30 on the PCL-R, studies among incarcerated women found a slightly lower rate of psychopathy. Loucks and Zamble (2000) conducted a study on a sample of 120 women recruited from the Canadian federal system, 11% of women exceeded the score of 30 on the PCL-R. In a study of 103 female inmates, Salekin et al. (1997) found a prevalence rate of 15%. In their study among 528 women prisoners, Vitale et al. (2002) found 9% of women with a score of 30 or more on the PCL-R. In an unpublished doctoral thesis, Strachan found that among 75 Canadian women prisoners, 31% met or exceeded a

score of 30 on the PCL-R. She attributed this high rate to the fact that nearly half of her sample came from a high security prison system. Strachan also suggested that the varied prevalence rates of psychopathy among women prisoners may reflect a possible gender bias in some PCL-R items (e.g., criminal versatility, juvenile delinquency, and revocation of conditional release) that may reduce the rates of psychopathy found in women. Summarizing the various studies, Jackson et al. (2002) concluded that the PCL-R scores observed among women are on average 4-6 times lower than those obtained in men. However, the PCL-R remains consistent in its ability to identify psychopathy among women (Vitale & Newman, 2001).

2.4. Culture and Psychopathy

This section will review studies on relationship between culture and psychopathy. The first subsection will deal with the interaction of culture and personality, while the second will focus on cultural variations in psychopathy.

Culture and Personality

Betancourt and Lopez (1993) defined the concept of culture in terms of the “values, beliefs and practices related to a particular ethnocultural group” (pp. 629-637). Hofstede provides a broad definition of culture as "the collective programming of the mind which distinguishes one group or class of persons from another" (Hofstede & McCrae, 2004, p. 58). These definitions emphasize that culture is a collective attribute, that can be observed through individual human behavior. According to Kirmayer (2007), this notion of culture refers to collective identity, which may be based on historical lineage,

language, religion, genetics or ethnicity. These definitions imply that culture can play an important role in shaping personality through developmental processes (Alarcon, Foulks & Vakkur, 1998).

Since the early 1900s, personality has been an important topic in the field of psychology. However, definitions of personality have varied from one author to another. According to Carl Gustav Jung (1932), “Personality is the supreme realization of the innate idiosyncrasy of a living being. It is an act of high courage flung in the face of life, the absolute affirmation of all that constitutes the individual, the most successful adaptation to the universal condition of existence coupled with the greatest possible freedom for self-determination” (p. 99). Jung's definition involves both the conscious and the unconscious, including the whole human being as an individual, in all its biological, social and spiritual aspects (Jung, 1932, p. 161). This means that personality includes both subjective and objective components of the life of each individual.

For Gordon Allport, personality is a “coherent datum of perception: an objective, devaluated essence” (Allport, 1930, p. 127). Zimbardo and Gerrig (1996) considered the personality as a set of complex traits related to an individual. Carver and Scheier presented a more contemporary definition of personality, as follows: “personality is a dynamic organization, inside the person, of psychophysical systems that create a person's characteristic patterns of behavior, thoughts, and feelings” (Carver & Scheier, 2000, p. 5).

Research on personality began in the early 1900's with personality models proposed by Freud, Jung, Adler, and Horney. Carl Jung addressed individual differences as related to personality traits that contributed to the identification of neuroticism (Hogan & Roberts, 2001), and to the understanding of abnormal personality and behavior.

Eysenck (1970, 1981) developed a widely influential three-dimensional model of personality that includes extraversion-introversion, neuroticism-stability, and psychoticism-superego that he tested in different studies. Thereafter, several models of personality were developed that promoted and increased interest in research on personality.

Human behavior results from interactions between personality and environmental factors including culture. Every human being must adapt to social environments shaped by culture. This involves an interplay between personality as a set of internal factors (traits) and the context or environment .

The intimate links between the psychology of an individual and the social and cultural characteristics of human groups were recognized a long time before anthropology, psychology and sociology became three distinct disciplines about 100 years ago (Jahoda, 1993). In the 1920s and 1930s, a largely American movement of anthropologists, psychologists and psychiatrists began to emphasize these connections under the rubric “culture and personality” (Mead, 1935; Sapir, 1949; LeVine, 2001). During the World War II, the United States government employed anthropologists to understand the psychology of its enemies and allies, and scholars developed portraits of the modal personality or “national character” of Germany, Japan, and Russia. The concept of national character and indeed, the whole culture and personality approach, lost its popularity in the 1960s (LeVine, 2001).

In recent years, work in the field of personality and culture has undergone major improvements in methodology, particularly regarding the extent of cross-cultural variation in personality, with more refined statistical and analytical techniques for

establishing the validity and equivalence of measures, and advances in computing technologies and communications to facilitate data collection and scientific cooperation between nations and cultures (van de Vijver & Leung, 1997; Church & Lonner, 1998a; McCrae, 2000a; Church, 2001a; McCrae & Allik, 2002; Harkness et al, 2003). Thus, the 1990s saw an increase in the number of studies concerning personality (Funder, 2001, p. 198), due to the significant advances in psychometrics including recognition of the relationship between personality and culture.

The emergence of the five-factor model was the major event that contributed to the revival of “personality and culture” studies (Digman, 1990). Although there is a range of words in every language to describe personality traits (e.g., nervous, enthusiastic, sensitive, possessive, etc.), Tupes and Christal’s study (1961), reproduced later by Goldberg (1981) and by McCrae and Costa (1985), established the evidence for 5 main factors, among adolescents and adults of both sexes: neuroticism (N); extraversion (E); openness (O); agreeableness (A); and conscientiousness (C). The instrument most often used by researchers to measure these five factors, is the Revised NEO Personality Inventory (NEO-PI-R, Costa & McCrae, 1992). In addition, according to Funder (2001, McCrae & Costa (2003) and Hofstede & McCrae (2004), the five factors are stable over the life of an individual. The five factors have a strong hereditary component as demonstrated by a series of studies in a variety of cultures (McCrae & Costa, 1997). Therefore, McCrae and Costa (2003) considered personality traits as biologically based characteristics of the human species that transcend culture. Hofstede and McCrae (2004), however, opened a new avenue of research by establishing links between personality and culture.

The Five-Factor Model of personality emphasizes the distinction between basic tendencies based on biology and environment, including culture. For example, all people have an innate capacity to acquire language, and any healthy child can learn to speak English, French or any other language, if exposed to this language at the right time. This means that the ability to speak is a universal basic capability. Any specific spoken or written language is an adaptation that depends entirely on the cultural environment (McCrae, 2000). Similarly, while there are broad dimensions of personality that can be discerned across cultures, the social environment, including culture, plays a crucial role in the development and functioning of any individual's personality. Culture and social context determine the conditions under which an individual personality has developed, and define the broad range of skills, values, attitudes and identities needed for adaptive functioning. Religious and cultural beliefs, food preferences, career interests, interpersonal tactics of manipulation and group loyalty are shaped by culture. In addition, to its developmental effects, the social environment also has an ongoing effect on the expression of personality traits. For example, an expression of sympathy for the deceased could be interpreted as an insult in a culture where the dead are never mentioned by name. Emotional restraint then could be mandated by social norms and limit expression of individual variations in emotional lability. This might become an enduring pattern of responding and hence, an aspect of the individual's personality.

From this perspective, the study of personality and culture is no longer a question of how culture produces a typical personality, but rather, how personality traits and culture interact over development and in specific social contexts to shape the behavior of individuals and social groups (McCrae, 2000, 2003). At the individual level, this

perspective suggests that attitudes, values, habits and skills, like all adaptive functions, require the interplay of the individual and the sociocultural context, including the environment as a whole (McCrae & Costa, 1999).

Recent work on personality disorders has linked them to the Five Factor Model (Widiger & Costa, 1994). Personality disorders may arise when individuals who are extreme on specific personality traits struggle to adapt to environments of great adversity (Paris, 1996). To the extent that personality disorders arise from pathological extremes or distortions of personality traits, it follows that there must be a relationship between culture and personality disorders, including psychopathy (Alarcon, Foulsk & Vakkur, 1998). This relationship might reside in the developmental shaping of personality traits as well as in the social norms and limits of tolerance that define a particular personality trait or style as abnormal (Paris, 1996, 1997).

Cultural Variations of Psychopathy

According to the literature, psychopathy has existed across cultures and time (Cleckley, 1941; Cooke, 1996, 1998). Murphy (1976) found that the concept of psychopathy could be identified in such distant and unrelated groups as the Inuit of Alaska and the Yoruba of northwestern Nigeria. Both ethnocultural groups made a distinction between social behaviour indicative of psychopathy and other mental disorders. This might suggest that psychopathy is a universal construct with little or no cultural variation. However, this conclusion may be premature. The models of personality and psychopathology that dominate psychology and psychiatry are based mainly on work in northern Europe and North America and have tended to neglect the cross-cultural

diversity of psychological phenomena, particularly in regard to personality disorders (Lewis-Fernandez & Kleinman, 1994).

As Draguns (1973) has noted, psychopathology depends on the adaptation process of individuals to their social environment and the prevailing sociocultural patterns.

In fact, studies have demonstrated the influence of culture on the expression of personality disorders, including psychopathy (Cooke & Michie, 1999; Gaurnacia & Lopez, 2000). For example, a study conducted by Weisz et al. (1987) showed differences in the prevalence of psychopathy between children who grew up in cultural environments with attenuated or severe behavioural control. This difference could be explained by the influence of cultural values, beliefs, and expectations on the development and education of children. These characteristics of a culture may inhibit or suppress the development of some aspects of child behavior and encourage others, depending on the environment in which the child grows up (p. 723). In the same vein, Hare (1998), highlights the fact that "behavioral expressions of psychopathy, are influenced by societal structures and cultural standards" (p. 106).

Cooke and Michie (1999) conducted a study using the PCL-R to examine whether the expression of psychopathy in Scotland was different from that observed in North America. They compared 2067 prisoners and psychiatric patients in North America and 246 Scottish prisoners, all males. Their results showed that psychopathy had the same emotional, behavioral and interpersonal characteristics in the two groups. However, there were differences between the two groups on some PCL-R items, specifically, "revocation of conditional release" and "short-term marital relationships." This may reflect the differences in the justice system and in social practices related to marriage, respectively

(Fiske, 1995). Moreover, there were also differences between the two groups related to items such as “glibness/superficial charm” and “grandiosity”, which had different degrees of social acceptability according to cultural norms. Cultural norms in Scotland do not encourage people to speak about their own abilities, accomplishments or prowess. This may influence the evaluation of some PCL-R items.

Differences in the prevalence of psychopathic traits between cultures may reflect cultural orientations including individualism and collectivism (Berry et al., 1992). In individualistic societies, as opposed to collectivist societies, societal values may tolerate or even foster superficial charm, grandiose sense of self-worth, promiscuity and short-term marital relationships, and a lack of responsibility toward other persons. The competitiveness of individualistic societies might contribute not only to a high crime rate, but also to a tendency to behavioural manipulation and parasitic lifestyles (Christie & Geis, 1970; Wilson & Hernstein, 1985; Cooke, 1996). On the other hand, the strong social norms and expectations for conformity that come with participation in a collectivist society may work against the expression of some of the traits associated with psychopathy (Paris, 1996). Consistent with this, in a comparative study of Taiwan (a collectivist community) and the United States of America (an individualistic society), Compton et al. (1991) found that there was a large difference in rates of antisocial personality disorder. The prevalence rate ranged from 0.10% to 0.22% in Taiwan and 1.49% and 5.66% in the United States of America.

Other evidence also suggests that acculturation and socialization may play an important role on the prevalence of psychopathy and related disorders, including the

gender differences observed in various studies (Rutherford, Cacciola, Alterman, & McKay, 1966; Rutherford, Alterman, Cacciola & Snider, 1995).

Studies of cross-cultural differences in personality traits, including psychopathy, depend on having culturally valid measures. This underscores the importance of re-validating the PCL-R before its use in a specific ethnic or cultural group, to ensure that the test can be generalized across cultures, and avoid potential errors in interpretation for research, as well as potential clinical diagnosis. This is especially important because the PCL-R is increasingly used for decision making related to treatment, judicial, correctional and public policies in North America and elsewhere (Zinger & Forth, 1999; Edens, 2001; Edens, Petrila et al. 2001; Edens, et al. 2001; Hare, 2001a; Cunningham & Reidy, 2002). Although research on psychopathy is growing, studies examining this construct in other cultural groups and women have been relatively limited until recently. Hence, the use of the PCL-R in different populations should be done with caution especially when it comes to generalizing the results from existing data on the PCL-R (Okazaki & Sue, 1955). This is particularly important in the case of African-Americans who are overrepresented in the U.S. justice system (Harrison & Karberg, 2003).

In summary, although the influence of culture on psychopathy has been highlighted in many studies, particularly in terms of variation in prevalence rates, much of the apparent variation may be due to methodological differences (McGilloway et al., 2010). Further studies, using culturally validated measures with more specific cultural groups, must be conducted in the future. This will allow better understanding of the nature of psychopathy and lead to the development of improved assessment tools and, ultimately, interventions.

CHAPTER 3: METHODOLOGY

The study took place in Kasapa prison located 15 kilometers from Lubumbashi, the capital of Katanga, a southern province of the Democratic Republic of Congo. The regional capital is Lubumbashi, the second largest city in the Democratic Republic of Congo, formerly Elizabethville under Belgium authority. The area of Katanga province is 518,000 square kilometers and it has a population of about 4.1 million. The eastern part of the province is a rich mining region, which supplies cobalt, copper, tin, radium, uranium and diamonds (CIA World Fact Book, 2008).

Elizabethville served as the capital and centre of the secessionist independent state of Katanga during the bloody 1960-1963 Congolese civil war, due to its important mining resources. Congo entered another genocidal civil war in the 1990s. The alliance of Democratic Forces for the Liberation of Congo rebels captured Lubumbashi in April 1997. Rebel leader Laurent-Desire Kabila spoke from Lubumbashi to declare himself president of the Democratic Republic of Congo on 17 May 1997 after Mobutu Sese Seko fled Kinshasa followed by the installation of parliament in Lubumbashi in 1999. Lubumbashi was the temporary legislative capital of the Democratic Republic of Congo from 1999 to 2003, when all the country's central institutions were brought back to Kinshasa. Despite a current lull in overall violence, endemic political conflict persists, with some rebel organization in the North regions of Katanga province associated with violence, insecurity and displacement of the rural populations (CIA World Fact Book, 2008).

The study location, Kasapa prison, is a 600-bed facility built in 1958. Currently, it can house 400 inmates. Kasapa prison was conceived of as a regional prison for adults with a carpentry rehabilitation program, which does not currently exist due to the effects of several episodes of war. It has facilities to accommodate both male and female inmates.

3.1. Study Design

This is the first study assessing psychopathy using the PCL-R in the Democratic Republic of Congo. The design was a cross-sectional study using quantitative measures. The quantitative methods allow us to examine the psychometric properties of the instrument, including its factor structure. In the future, qualitative research can be used to provide in-depth descriptions psychopathic traits and behaviours in cultural context, to consider refinements of the measure (Tashakkori & Teddlie, 2003) in a specific cultural Environment.

3.2. Participants

All prisoners present at Kasapa prison between 18 February 2006 and 2 October 2006 were included in this study. Out of 386 Congolese prisoners, 361 males and 25 females, present at Kasapa prison during the period of the study, only the male prisoners were included in this present study. This was due to the fact that being a first exploratory research in our region, it was more appropriate to consider the males because the PCL-R has been well validated on the male prison population (Hare, 1991). Also, the number of females would have been too small to analyze as a separate sample.

A total of 361 interviews were conducted, but only the 336 male Congolese prisoners who fully completed the interview process were retained for this study. All spoke French and Swahili fluently and were considered able to be interviewed. However, Swahili was used in some cases (6%), by the interviewers who were all Swahili speakers, to clarify some ideas or concepts. In general, the questionnaire was well tolerated, with few respondents reporting it as upsetting, mainly in the matters related to their Criminality.

3.3. Measures

The PCL-R (Hare, 1991), a semi-structured interview designed to assess for psychopathy, was used in this study in its French version, which had been previously validated among prisoners in Québec, Canada (Côté & Hodgins, 1996). The psychometric results of the French version in the Quebec sample were comparable to those of the English version (Mean = 21.1; interrater reliability = 0.8 and internal consistency = 0.88). A factor analysis of the PCL-R French version also found an internal structure similar to that of the English version (Côté, Hodgins, Toupin & Ross, 1994).

The PCL-R is a comprehensive interview tapping details of school adjustment, work history, career goals, finances, health, family life, sexual relationships, drug use, childhood and adolescent antisocial behaviour, and a number of general questions. The length of time required to administer the interview was 1-2 hours. Close attention was paid to interview style because, although this is a semi-structured interview, the intention is not to present it in too formal or rigid a fashion because establishing good rapport with the subject is essential to observe and to rate the interpersonal items (Factor 1).

Review of collateral information

Careful review was made of all available information to complement that already gained through interview and to measure concordance between interviews and case file information. Typical sources of additional information were prison security files containing background reports and information from interviews with prison officers, and social workers present during the inmate's time on the assessment unit at Kasapa prison. Further information was drawn from medical records including confidential files with court reports and detailed history of the prisoner's progress during his incarceration.

Scoring

The PCL-R is composed of 20 items. Each of the PCL-R items were scored on a scale of 0 – 2, where 0 signifies that the item does not apply to the individual, 1 that this item is applicable in some but not all aspects, and 2 that the item is highly applicable to this individual. Addition of these item scores yields a total score from 0 to 40, as well as separate subscale scores on factors 1 and 2. In line with recommendations in the PCL-R manual (Hare, 1991), the diagnostic cut-off point was set at 30 to classify individuals as psychopaths. Thus, individuals with a PCL-R score of 30 and above were considered psychopathic. A result from 0 to 20 was classified as non-psychopathic, and a result between 20 and 29 corresponded to a mixed presentation. As described in Table 1 the items include the behavioural, affective and interpersonal items that characterize psychopathic personality disorder.

Table 1: PCL-R items and their factors/facet placement according to Hare (1991) and Hare (2003)

Item	Description	Hare (1991)		Hare (2003)			
		F1	F2	F1	F2		
				f1	f2	f3	f4
1	Glibness/Superficial charm	X		X			
2	Grandiose Sense of Self Worth		X	X			
3	Need for Stimulation/Proneness to Boredom					X	
4	Pathological Lying	X		X			
5	Conning/Manipulative	X		X			
6	Lack of Remorse or Guilt	X			X		
7	Shallow Affect	X			X		
8	Callous/Lack of Empathy	X			X		
9	Parasitic Lifestyle		X			X	
10	Poor Behavioural Controls		X				X
11	Promiscuous Sexual Behaviour						
12	Early Behavioural Problems		X				X
13	Lack of Realistic, Long-Term Goals		X			X	
14	Impulsivity		X			X	
15	Irresponsibility		X			X	
16	Failure to Accept Responsibility for Own Actions				X		
17	Many Short-Term Marital Relationships						
18	Juvenile Delinquency		X				X
19	Revocation of Conditional Release		X				XX
20							

According to Skeem et al. (2004), although there are competing models of PCL-R, the most complete factor score data allowing comparison of results are for the original two-

factor model, which has been widely accepted by researchers and clinicians. This model, which has two factors that are each constituted by the basic personality traits and characteristics related to antisocial lifestyle, has been considered in this study.

3.4. Procedure

With ethics approval for the protocol from the provincial medical and justice authorities, and prison administration, all the participants were approached individually and were fully informed of the purpose and requirements of the study in order to obtain consent. All individuals approached gave written consent. No compensation was offered. The interviewing team was composed of three members among which one, a neuropsychiatrist, was the trainer. He was trained by experts in psychopathy of Philippe Pinel research centre, a forensic mental health institute, in Montreal, Canada. He is the one who ensured the training of the two interviewers who are physicians. Prior to the data collection, interviewer training applied the following sequence: (i) the interviewers studied the PCL-R manuals and related materials; (ii) several didactic sessions were conducted by the trainer, who reviewed the concept of psychopathy and the individual PCL-R items and interviewing and coding techniques, followed by discussion of problem areas, and (iii) practical scoring sessions.

Data analysis

Data analysis examined the psychometric properties of the PCL-R. Regarding sociodemographic characteristics, the distribution of frequencies of mean and standard deviation of age, marital status, education, profession was done including the age range.

The same calculation was done for criminal background (cause of arrest, recidivism, and violence), drug and alcohol use and the life style, taking into account the culture and traditional beliefs and the current context of war in the Democratic Republic of Congo.

Concerning the PCL-R properties, the distribution of the scores of the following variables was considered: PCL-R total score, item-total reliability, cut-off and prevalence. The intraclass correlation coefficient (ICC) between Rater 1 and Rater 3 (trainer) was 0.54; ICC between Rater 2 and Rater 3 (trainer) was 0.84 at the end of data collection. Therefore, as the trainer (Rater 3) interviewed only 58 prisoners, the Rater 1 data was rejected. Only the Rater 2 data was considered in this study. To investigate the difference between the results found in this study and those reported by Hare (1991) in North America and elsewhere, two-independent sample *t-tests* were carried out. The null hypothesis of difference was rejected at the .05 significance level. The data analysis of descriptive statistics was done using the Statistical Package for Social Science (SPSS) version 16.0 and MEGASTAT version 9.1

CHAPTER 4: RESULTS

This part of the study focuses on analyzing the results. It comprises two parts. The first part concerns the characteristics of the sample including province of origin, sociodemographics and criminal history background of the subjects. The second one analyses the psychometric properties of the PCL-R.

4.1. Province of origin

All the regions of the Democratic Republic of Congo were represented in this study. However, the majority of the inmates were from Kasai-Oriental province with 124 (36.9%) participants as reported in the many studies conducted in the Democratic Republic of Congo (Okitaopoy et al., 1984). The remaining participants were from the following provinces; Katanga, 92 (27.4%); Maniema, 37 (11.0%); Bandundu, 16 (4.8%); Bas-Congo, 15 (4.5%); Kasai-Occidental, 15 (4.5%); Equateur, 11 (3.3%); Nord Kivu, 10 (3.0%); Sud Kivu, 10 (3.0%) and Oriental province, 5 (1.5%).

4.2. Socio-demographic Characteristics of Sample

The data presented in Table 2 are based in a sample of 336 male Congolese individuals whose age were ranging from 16 to 69 years old (mean age of 32.3 years), with 94.1% born after independence (after 1960) and 5.8% before independence. Most subjects were single (41.97%) or married (41.37%); 15.78% were divorced; they had between 0 and 11 children. As regards education, 65.77% had a secondary level. The majority of subjects were businessmen (32.1%) or military (30.6%).

Christians accounted for 80% of the sample population. Most were Roman Catholic (50%), followed by Protestant (20%) and Kimbanguist (10%). The Kimbangu Church was founded by a Congolese named Simon Kimbangu who originally worked with

the Baptist missionaries as catechists. It is based on the Protestant doctrine associated with the African knowledge and beliefs. Simon Kimbangu was arrested by the colonialists and he died in prison nearly thirty-years of imprisonment. Of the remaining 20% of the sample population, half were Muslim, and the remainder followed traditional beliefs or syncretic sects.

4.3. Alcohol and Drug use

With regards to alcohol consumption before to be arrested, 296 inmates (87.89%) admitted to have used alcohol before their arrest (beer, 170 (50,59%) and any alcohol, 99 (29.46%). The breakdown of response according to different types of alcohol (Tab. 3). As regards to drug use; 108 (32.14%) accepted to have used cannabis and 226 (67.26%) denied any substance use before their arrest.

4.4. Criminal history background

Of the nature of arrest, 77 (22.9%) were arrested for aggravated theft, 69 (20.5%) for sexual assault and 35 (10.4%) for assault with weapon (Tab. 4). In the relation to the number of arrests, 54.3% were at their first arrest, 24.4% at their second and 11.1% at their third arrest, and the remaining more than three times. Among the offenses, 71 (21.13%) are violent offences and 242 (72.02%) are non-violent crimes. However, there are 9 (8.0%) of homicide including attempt murder with, 7 (2.1%) cases of gangsterism, criminal activities associated with a gang or an organized criminal group.

4.5. PCL-R properties

The purpose of this part of the study is to establish the psychometric properties of the Psychopathy Checklist Revised among Congolese prisoners. The psychometric data of the PCL-R will be presented including the distribution of scores from this study (PCL-

R's total scores, Factor 1 and Factor 2), the score means and the different categories according the PCL-R's score: psychopathic group (PCL-R's score = 30 or more); mixed group (PCL-R's score between 20 to 29); and non psychopathic group (PCL-R's score between 0 to 20).

In this present study, all the PCL-R scores were less than 30 with, 84.2 % between 0 to 20 (non psychopathic group); 15.7% between 20 to 29 (mixed group). The mean of PCL-R total scores for the sample was 10.83 with a standard deviation of 4.32. The mean score for factor 1 is 4.68, SD 2.45. The mean for factor 2 is 4.90, SD 2.43. The table 5 presents the mean, standard deviation, item-total reliability and Kappa for each item.

It shows a low reliability of 4 items (10 = Poor behavioral controls, 18 = Juvenile delinquency, 19 = Revocation of conditional release, 20 = Criminal versatility). There are poor inter-ratter reliability (item 9 = Parasitic lifestyle) and low reliability and poor inter-ratter reliability (item 14 = Impulsivity); low reliability (item 6 = Lack of remorse and guilt) and low reliability (item 4 = Pathological lying).

PCL-R structure (4-factor hierarchical model), item-total reliability and Kappa show a low reliability of 4 items (10, 18, 19, and 20) of Facet 4: Antisocial (20%). There are poor inter-ratter reliability (item 9) and low reliability and poor inter-ratter reliability (item 14) of Facet 3: Lifestyle (10%). Low reliability (item 6) of Facet 2: Affective (5%) and low reliability (item 4) of Facet 1: Interpersonal (5%) as shown in tab 6. The prevalence of psychopathy among the 336 Congolese prisoners is 4.4% with a temporary cut-off of 25 or more (Tab. 7).

Corrected item total correlations between the scores on the individual item and the sum of scores (Cronbach's alpha = .63), ranged from 0.21 to 0.31, and interclass

correlation (ICC) = .85 (absolute agreement) (CI = .72 to .92). Internal consistency for corrected total items without items 18, 19, 20 is .63.

4.6. Comparison of data reported in North America and elsewhere with the results of this study.

To investigate whether the results we found were significantly different from those reported by Hare (1991), a two-independent samples *t*-test was carried out. Upon examination of the statistical output, the null hypothesis of differences was rejected at the 0.05 significance level. Consequently, a significant difference was observed between the two sample data as the *p*-value associated with this test was discovered to be extremely small (Table 8). In order to investigate whether the results found in Democratic Republic of Congo were significantly different across cultures (North America, Scotland, UK, Belgium, Spain, Portugal, and Canada); eight two-independent samples *t*-tests were conducted. Upon examination of the statistical output for each statistical test, the null hypothesis of differences was rejected each time at the 0.05 significance level. Therefore, significant differences were detected between any of the eight pairs of independent sample data as *p*-value associated with each of these eight *t*-tests was exceedingly small ($p < .0001$) (Table 8).

To investigate whether the African Congolese prisoners' results were different from those of other prisoners (European American and African American prisoners). Four two-independent samples *t*-tests were carried out. Upon examination of the statistical output for each statistical test, the null hypothesis of differences was rejected each time at the 0.05 significance level. Hence, significant differences were detected

between any two of the four pairs of independent sample data as p-value associated with each of these four t-tests was all time exceedingly small ($p < .0001$) (Table 8).

4.7. Factor analysis

Exploratory factor analysis of the PCL-R items yielded a Kaiser-Meyer-Olkin statistic of .63, suggesting that clear factors would not emerge from these data. Visual inspection of the scree plot indicated a two factor solution, but these two factors were only able to explain about 20% of the variance. Moreover, many of the items had low communality and as a result did not load clearly on either factor. For these reasons, a four-factor solution was also attempted, but many of the same problems were observed. We therefore concluded that we could not further pursue a factor analytic approach with these data (Dziuban & Shirkey, 1974).

CHAPTER 5: DISCUSSION

The findings in this study indicate that all psychometric data collected from Congolese prisoners using the PCL-R are generally low. Nevertheless, although these values are low, they are within acceptable limits compared to data reported in normative studies conducted in North America and Europe (Table 7). As Kosson et al. (1990) revealed, the psychometric data from the PCL-R may vary in different demographic groups and across different cultures, as culture has an influence on the development and expression of personality (Triandis & Suh, 2002). In addition, individual experiences shaped by cultural and social environments have an impact on all stages of development and an individual's different personality. Culture defines what is normal and abnormal and what is considered deviant behavior. When speaking of deviance, we must consider how the individual is viewed by others and how he differs from the standards of a given society (Habimana & Masse, 2000). Therefore, individual abnormal behaviors are considered unusual and undesirable based on culture and the context in which an individual finds himself. Deviation from social norms defines the distance that an individual will have from the norms in a given society. Therefore, what is considered normal in one culture may be considered abnormal in another. Culture therefore contributes to the manifestation of personality disorders and the onset of symptoms or any deviant behaviors (Alarcon & Foulks, 1995a, b; Paris, 1977).

Nevertheless, the assessment of PCL-R factors is based on the evaluation of complex interpersonal and social settings and the cultural influence of the evaluator and the client, which may affect their rating. One first explanation of the low psychometric values found in this study may be that there are errors in the assessment of certain PCL-R

factors. Indeed, the following factors all exhibited low values in psychometric evaluation, in both the traditional form, i.e. using two factors, as well as in the type with four PCL-R factors: tendency toward parasitism (9); tendency for pathological lying (4); various types of parole violations (19); a wide range of crimes committed by the subject (20); juvenile delinquency (18); lack of self-control (10); impulsivity (14), and a lack of remorse or feeling of guilt (6).

In contrast to the individualist societies found in North America, the Democratic Republic of Congo is a collectivist society where living with a brother, dining at a friend's or family member's or receiving assistance in case of difficulties, and any other form of assistance, is not considered parasitism. Everything is shared and managed in the traditional family unit and community (Triandis, 1995). Parasitism, which may be considered a deviant behaviour, is tolerated in Sub-Saharan African societies such as the Democratic Republic of Congo.

In a war context such as that of the Democratic Republic of Congo, children grow up in a climate of permanent insecurity which sometimes requires that they lie to protect members of the community. The majority of subjects in this study were born and grew up after independence, therefore during the war. In addition, the truth sometimes brings about jealousy and envy, especially with regard to the property in ones possession or any other form of wealth or affluence which can attract the evil effects of shamans as a result of due jealousy and envy (Buakasa, 1980; Habimana, 1988). This causes people to lie in certain circumstances. The liar is usually branded but tolerated in society. Under certain circumstances, value is even placed on lying in traditional societies, and is sometimes the

object of admiration and indicative of a certain degree of intelligence. Lying is therefore not considered a deviant behavior.

The existence of differences in the judicial system may also lead to errors in evaluation and rating for Item 19 (violations of conditions of parole). In the Democratic Republic of Congo, in the case of an escape from prison, the initial cause for arrest is upheld whereas in North America a charge of evasion will receive a 2 rating for factor 19 in the PCL-R. This can also be the cause of the low psychometric values collected in this study.

The Democratic Republic of Congo is traditionally a polygamous society, and although it is not recognized in official documents, it is well tolerated in Congolese society. Although not present amongst the factors with low psychometric data, it is important to note that polygamy, sexual promiscuity and various short-term, non-marital relationships are not considered deviant behaviors (Draper, 1989). On the contrary, they are a proof of an individual's virility.

Given the culture and what remains of the collective memory of the Congolese society, appreciation of the PCL-R factors may be influenced and thus lead to errors in scoring, especially since the reviewers and subjects in this study are all Congolese (Heine & Buchtel, 2009). This could explain the differences in psychometric data in the PCL-R between the DRC and North America. It is therefore necessary to carry out a validation of the PCL-R in a Congolese environment, using a qualitative approach of all its factors. This constitutes the second stage of this study in the Democratic Republic of Congo. While all prisoners included in this study have on average some level of secondary education and all speak French, language may be problematic. Indeed, the understanding

of psychopathy, a complex concept, with which they are not familiar, must be evaluated in a multicultural perspective. Therefore, a comparative study between two groups of Congolese prisoners, a French-speaking group and a Swahili-speaking group, could help us to better explain the impact of language on the evaluation of various factors.

The last factor that may influence the evaluation and rating of different factors of the PCL-R is the prison environment. This is obvious and can lead to errors in the evaluation of PCL-R factors through the responses of subjects, especially since it is in a postwar context. Because they fear disclosing information that may be used against them, prisoners can give false answers in a deliberate manner and distort the results of the evaluation, bearing in mind the absence of compensation and the subjective nature of information in a correctional environment (Hare, 1980; Harris, Rice & Cormier, 1991; NCCH, 2003).

All the aforementioned factors are likely to influence and lead to errors in the assessment of cross-cultural factors of the PCL-R, which may explain the poor psychometric values found in this study (Gregory, 1996; Kanjee, 2001).

As for the comparisons of various data from this study and those found in North America or elsewhere, the differences are statistically significant (Tables 12 and 13).

The differences can be explained by the role of culture in the assessment of prisoners and the sociological and environmental context that differs from that in North America and Europe. A number of factors may influence the evaluator's assessment and lead to errors, including culture and societal norms, beliefs and attitudes and the expectations of the group to which this person belongs. The work of Cooke (Cooke, 1998; Cooke & Michie, 1999) provides a good illustration of the approach to be

followed. In validating the PCL-R for use in white male Scottish populations, this group has demonstrated that a score of 30 in the PCL-R in North America is metrically equivalent to a score of 25 in Scotland. However, even when the cut-off score of 25 is used, the prevalence of psychopathy in Scotland is only 8% (Cooke & Michie, 1999), substantially lower than in North America due probably to cultural factors, migration, and inter-rater effects (Cooke & Michie, 1999; Wernke & Huss, 2008). This shows that in addition to considering the quantitative aspects of PCL-R, future research should be carried out using a qualitative approach in an environment culturally different than that in North America, such as the Democratic Republic Congo. This will assist in better understanding the concept of psychopathy and the various items of Hare's PCL-R scale which contribute to the validation of the instrument based on the socio-cultural reality of the Democratic Republic of Congo.

Some findings from this study, however, are consistent with that found in the literature. This concerns in particular: instability (marital status, professional profile), alcohol and drug use, and violence (Hare & Mc Pherson, 1984b) and re-offending in crime (Hare, McPherson & Forth, 1988). Indeed, the majority of prisoners in this study were single or divorced, and were either in the military, or were businessmen. At present, a businessman in the Democratic Republic of the Congo means a man with no fixed profession. Both marital status and occupational profile suggest instability in their lifestyle. Beyond the aspects concerning the lack of self-control and the multiple types of offences (Hare & Jutai, 1983), pleasure seeking, a lack of empathy and sensitivity towards others, as well as the need to feel superior to others because of their self-overestimation, are all characteristics which may facilitate the expression of violent

behavior, instability and the need for stimulation by alcohol and drugs. Violent behavior is consistent with the lack of inhibition observed in psychopaths (Arnett, 1997). This matches the data found in this study. In addition, gangsterism, which is consistent with data from North America, can be more often found in post-crisis environment like in the DRC.

CHAPTER 6: CONCLUSION

Psychopathy has a history dating back several decades and it has been related to various diagnostic constructs including psychopathic, antisocial, dissocial and sociopathic personality disorder. However, data from different studies have shown that psychopathy is a distinct and specific clinical entity that differ from antisocial personality disorder as defined by the DSM-IV. Furthermore, there is accumulating data and clinical experience that show the difficulties that clinicians face in attempting to make the diagnosis of psychopathy due to inconsistent clinical features. The advent of Hare Psychopathy Checklist Revised has clarified the condition and it has rendered the diagnosis of psychopathy easier due to its operationalized criteria. In addition, numerous studies have demonstrated the reliability and the validity of PCL-R and it is currently considered the instrument of choice for the diagnosis of psychopathy. However, research on psychopathy has mainly focussed on normative data of North America. As yet, there are few studies in non-European regions such as Sub-Saharan Africa, and no study at all in the Democratic Republic of Congo. Therefore, in this study, we sought to assess psychopathy using the PCL-R among male prisoners in DRC.

Results of the data analysis show that the psychometric properties of PCL-R in this study were poor compared with those observed in North America and some European countries. However, although these results remained within the range of those found elsewhere.

One of the most likely explanations for the findings of this study may be related to cultural factors. Indeed, human behavior results from interactions between personality and environment including culture, to serve adaptive purposes. This link plays an

important role in the life of every individual as these interactions help each person accommodate to the social norms that define values, religion, beliefs, identity etc., that are necessary for its smooth development and functioning within the society. Thus, the limits of normal and abnormal behavior have to be assessed in relation to sociocultural context of each individual. Therefore, the behavior, including the expression of mental illness are influenced by culture and the assessment of PCL-R items may be influenced by both interviewer and interviewee culture. This particularly concerns the assessment of items such as parasitic lifestyle, pathological lying, many short-term marital relationships and revocation of conditional release. Indeed, in a collectivist culture, the lying is better tolerated than in individualist culture, especially when it is used for the benefit of the community or to protect against evil spirits according to collective African memory. In such cultures, people identify with the group and their fundamental values are based on the tradition, conformity, order and obedience. This becomes more important in circumstances such as conflict or post conflict settings, as in the Democratic Republic of Congo. Moreover, in such collectivist cultures, parasitism is not a socially deviant behavior, as each person is defined in relation to the community. The individual lives in mutual support within their community. This constitutes a positive value and not a type of social deviance. Further, Congolese society is traditionally polygamous. Hence, many short-term marital relationships are considered as a sign of virility and wealth and are tolerated by the community. All the PCL-R items associated with this cultural norms and practices therefore are not considered as forms of socially deviant behavior and may not have the same psychopathological significance. Added to this is also the difference of the judicial system, particularly as regards the revocation of conditional release. Therefore,

evaluating all these PCL items may be influenced by culture and the Congolese judicial system. This may explain the difference between the psychometric properties of PCL-R of Democratic Republic of Congo and those of North America and some European countries. Therefore, in any cross-cultural study on psychopathy using the PCL-R, the investigator should take into account the sociocultural context and the legal system in which the respondent lives. This will allow the interviewer to avoid a biased assessment of the various PCL-R items.

Finally, the findings of this first study should be considered as an initial step in research on the use of PCL-R in cross-cultural studies of psychopathy in the DRC. The psychometric issues concerning PCL-R should be evaluated in the Democratic Republic of Congo more extensively, given the current place of psychopathy and its consequences in the judicial system of any country.

Limitations and Future Research

In this study done in a prison without a clear security level, in a post-crisis setting, soldiers were among the majority of the participants. The collateral information on each prisoner was laborious to collect as the records were poorly completed and not properly kept. This did not allow us to collect the same information regarding each PCL-R item for all prisoners. As the first study in this area to be conducted in the Democratic Republic of Congo, we faced a problem concerning the lack of any data on psychopathy in the general population, in prisons including both genders and in different type of psychopathology associated with psychopathy. The prevalence of psychopathy in the DRC is unknown. In addition, although all participants speak French and a French version of the PCL-R was used in this study, some of the items that are criteria of

psychopathy are complex and their recognition and interpretation could be influenced by culture. The language issue should be taken into account in future studies and the PCL-R questionnaires should be translated in the four national languages of the Democratic Republic of Congo, including Lingala, Swahili, Kikongo and Luba. It would also be necessary to determine the PCL-R cutoff points in the DRC using a large sample of the general population of each sex, externally validated with other measures of the presence of psychopathy. Research on psychopathy and associated psychopathology should be considered in the future researches. In addition, future research on the cross-cultural PCL-R validity of psychopathy should examine the generalizability of the findings across measures to avoid bias in using only one measure (Cooke & Michie, 2002). Finally, it is important that future research be conducted among more specific groups. Taking into account the results of this study, a cross-cultural validation of the PCL-R is need in the Democratic Republic of Congo. This will require other measures of psychopathy and related constructs to allow external validation.

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APPENDICES

Table 2: Socio-demographic Characteristics of Sample (N=336)

	n	%
Marital Status		
Married	139	41.37
Single	141	41.97
Divorced	53	15.78
Widowed	3	0.88
Education Status		
Primary	86	225.59
Secondary	221	65.77
University, College	21	6.71
Other	8	2.38
Occupation Status		
No specific profession	125	37.21
Business	108	32.14
Military	103	30.65

Table 3: Frequency of alcohol consumption before arrest (N = 336)

	n	%
1. Beer	170	50.59
2. All kind of alcohol	99	29.46
3. Beer and whisky	15	4.46
4. Beer and indigenous liquor (maize)	8	2.38
5. Whisky	2	.60
6. Indigenous liquor	1	.30
7. Beer, indigenous liquor(maize) and whisky	1	.30
8. Missing	2	.60
9. No alcohol consumption	38	11.31

Table 4: Causes of arrest

	n	%
1. First degree murder	14	4.2
2. Second degree murder	3	.9
3. Aggravated murder	1	.3
4. Murder	9	2.7
5. Sexual Assault	69	20.5
6. Assault with a weapon	35	10.4
7. Aggravated assault	1	.3
8. Threats, intimidation	7	2.1
9. Assault with intent to mutilate	1	.3
10. Assault with intent to injure	14	4.2
11. Brandishing a firearm	1	.3
12. Use of a firearm in a criminal act	1	.3
13. Abduction	1	.3
14. Aggravated theft, assault with intent to steal	7	2.1
15. Aggravated theft	77	22.9
16. Theft, attempted theft	13	3.9
17. Handling, possession of stolen goods	2	.6
18. Breaking and entering with intent	1	.3
19. Disturbing the peace	1	.3
20. False pretense	15	4.5
21. Violation of probation	1	.3
22. Attempted theft with a weapon, aggravated theft	1	.3
23. Forgery, intent to defraud	6	1.8
24. Trespassing	2	.6
25. Burglary	2	.6
26. Driving under the influence or >80 mg blood alcohol	1	.3
27. Extortion (Attempted)	20	6.0
28. Flight	1	.3
29. Gangsterism	23	6.8
30. Other	6	1.8

Tab 5: PCL-R's item properties (n=336)

Item	Mean	SD	Item-Total Correlation	Kappa
1. Glibness/ Superficial charm	0.85	0.69	.21	1.00
2. Grandiose sense of self	0.64	0.72	.31	.76
3. Needs stimulation/prone to boredom	0.54	0.67	.28	.74
4. Pathological lying	0.29	0.52	.07	.82
5. Conning/manipulative	0.59	0.68	.19	.82
6. Lack of remorse and guilt	0.54	0.65	.29	.60
7. Shallow affect	0.62	0.62	.23	.81
8. Callous/Lack of empathy	0.48	0.62	.27	.78
9. Parasitic lifestyle	0.53	0.66	.20	.67
10. Poor behavioural controls	0.42	0.64	.11	.89
11. Promiscuous sexual behavior	0.60	0.65	.24	.59
12. Early behaviour problems	0.55	0.66	.15	.80
13. Lack of realistic long-term goals	0.57	0.65	.20	.76
14. Impulsivity	0.40	0.57	.13	.66
15. Irresponsibility	0.61	0.66	.22	.73
16. Fails to accept responsibility	0.68	0.71	.23	.76
17. Many short-term marital relationships	0.65	0.76	.28	.67
18. Juvenile delinquency	0.32	0.60	.04	.86
19. Revocation of conditional release	0.32	0.59	.04	.87
20. Criminal versatility	0.64	0.82	.03	.91

Table 6: PCL-R structure (4 factor model), item-total reliability and Kappa

		Item-Total Reliability	Kappa
Factor 1: Interpersonal/Affective			
Item	Description		
Facet 1: Interpersonal			
1	Glibness/Superficial charm	.21	1.00
2	Grandiose Sense of Self Worth	.31	.76
4	Pathological Lying	.07	.82
5	Conning/Manipulative	.19	.82
Facet 2: Affective			
6	Lack of Remorse or Guilt	.29	.60
7	Shallow Affect	.23	.81
8	Callous/Lack of Empathy	.27	.78
16	Failure to Accept Responsibility for Own Actions	.23	.76
Factor 2: Social deviance			
Facet 3: Lifestyle			
3	Need for Stimulation /Proneness to boredom	.28	.74
9	Parasitic Lifestyle	.20	.67
13	Lack of Realistic, Long-Term Goals	.20	.76
14	Impulsivity	.13	.66
15	Irresponsibility	.22	.73
Facet 4: Antisocial			
10	Poor Behavioral Controls	.11	.89
12	Early Behavioral Problems	.15	.80
18	Juvenile Delinquency	.04	.86
19	Revocation of Conditional Release	.04	.87
20	Criminal Versatility	.03	.91

Table 7: Prevalence of psychopathy among prisoners across cultures

Research group	Population	Participants	PCL-R	Cut-off	Prevalence%
Cooke (1995)	Scottish	Prisoners	13.8 (7.4)	30/25	3/8
Cote & Hodgkin's (1996)	Canadian	Prisoners	22.6 (9.0)	30	20/8
Conclaves (1999)	Portuguese	Prisoners	15.5 (1.8)	30 or more	15
Hare et al. (2000)	British	Prisoners	16.5 (7.8)	30/25	4.5/13
Hare (2003)	North American	Prisoners	22.1 (7.9)	30 or more	20.5
Molto et al. (2000)	Spanish	Prisoners	22.4 (7.9)	30 or more	18
Okitapoy et al. (2010)	Congolese	Prisoners	10.8 (4.3)	25 or more	4.4
Pham (1998)	Belgian	Prisoners	18.8 (9.3)	30 or more	5
Rasmussen et al. (1999)	Norwegian	Prisoners	22.6 (10.0)	26 or more	49

Table 8: Study Characteristics and Comparison with Current Data

Research group	Country	Population	N	PCL-R	Difference	df	t
1. Cooke (1955)	Scottish	Prisoners	30	13.8	2.97	483	6.14*
			7	(7.4)			
2. Cote & Hodgins (1996)	Canadian	Prisoners	10	22.6	11.77	120	13.00*
			6	(9.0)			
3. Goncalves (1999)	Portuguese	Prisoners	15	15.5	4.67	482	16.81*
			0	(1.8)			
4. Hare (1991)	North American	Prisoners	54	22.1	11.27	487	43.51*
			08	(7.9)			
5. Hare et al. (2000)	British	Prisoners	72	16.5	5.67	102	15.20*
			3	(7.8)		8	
6. Hare (2003)	European American	Prisoners	21	23.2	12.37	717	42.99*
			19	(7.6)			
7. Hare (2003)	African American	Prisoners	21	22.8	11.97	998	35.65*
			19	(7.3)			
8. Kosson et al. (1990)	European American	Prisoners	23	25.7	14.87	358	29.46*
			2	(6.8)			
9. Kosson et al. (1990)	African American	Prisoners	12	28.0	17.17	175	30.03*
			4	(5.8)			
10. Molto et al. (2000)	Spanish	Prisoners	11	22.4	11.57	140	15.08*
			7	(7.9)			
11. Okitapoy et al. (2011bvfd)	Congolese, DRC	Prisoners	33	10.8	11.77	120	13.00*
			6	(4.3)			
12. Pham (1998)	Belgian	Prisoners	12	18.8	7.97	141	7.45*
			3	(9.3)			
Rasmussen et al. (1999)	Norwegian	Prisoners	41	22.6	11.77	41	7.45*
				(10.0)			

* $p < .05$

