



Psychopathy: A comprehensive review of its assessment and intervention [☆]



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ARTICLE INFO

Article history:

Received 25 November 2013
 Received in revised form 6 April 2014
 Accepted 8 April 2014
 Available online 18 April 2014

Keywords:

Psychopathy
 Assessment
 Intervention

ABSTRACT

Psychopathy is one of the most studied personality disorders, in terms of the negative impact that the behaviors associated with this disorder – particularly, the criminal behavior – have in the community where the individual lives. The aim of this article is to present a comprehensive literature review on psychopathy, focusing some difficulties related to its concept, assessment, and intervention. Here, psychopathy is presented as a construct resulting from decades of clinical and empirical research, and whose dimensional nature justifies the possibility of assessing the general population. Studies indicate that psychopathy is manifested in a number of behaviors resulting from biological and personality factors related to a series of family history and environmental factors. We emphasize the need for more empirical research on psychopathy in the general population in Portugal, regarding the development and adaptation of measures of the construct.

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1. Introduction

Experts have been encountering individuals who, although evidencing “behavioral of mental insanity”, did not evidence any delusional, hallucinatory, nor deficient symptomatology, since the early days of Psychology and Psychiatry.

In 1801, Pinel named “manie sans délire” (manic without delirium) those individuals who had no hallucinations or understanding disorder, but who did evidence a behavior with signs of mental insanity (Murray, 1997).

Later in 1822, Prichard introduced the concept of “moral insanity” for those individuals with behavior characterized by morbid perversity (Berrios, 1996).

Lombroso, in the second half of the 19th century, related elements of body morphology that could prognosticate propensity for crime (Bollone, 1992).

In 1904, Kraepelin employed the term “psychopathic personalities” to refer to a type of people who are neither neurotic nor psychotic (Schneider, 1943).

More than 80 years later, Cleckley (1988) considered psychopathic personality disorders as insanity without symptoms peculiar to psychosis.

The number of authors who have studied the issue of abnormal personalities is countless. For decades, researchers have found better or differentiated ways to define, describe, and categorize these personalities.

It was only in DSM-III (1980), with the creation of Axis II, that the diagnosis of abnormal personalities stood out in psychological/psychiatric nosography.

There is not – and there will never be discovered – a single gene or biological cause for antisocial behavior. However, that does not mean that the hereditary characteristics, such as intelligence and temperament,

[☆] The authors do not have any interests that might be interpreted as influencing the research. The study was conducted according to APA ethical standards.

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are of no interest and cannot influence the probability of the individual to manifest a pattern of criminal behavior (Almeida, 1999).

The concept of psychopathy has been studied over many decades, during clinical and empirical investigations. The psychopathy construct results from a set of personality disruptive traits, and antisocial behavior. However, there is no consensus among researchers regarding its definition. This is a psychological concept which is very useful – particularly in the judicial environment – to characterize certain behavioral and emotional patterns in particular.

Along with the development of the study of the personal mind, associated with several personality characteristics, it was observed that certain criminals, who had shown high levels of aggression and cruelty, did not present any signs of insanity. Thus, the contemporary term psychopathy was born, mainly from the forensic medicine world.

In 1857, Esquirol named *Monomania* to this type of disorder (Nunes, 2009).

Around 1801, the French doctor Philip Pinel was the first to provide scientific characterizations of these particular behavioral and affective patterns close to the current ones. He called this type of patterns *mania without delirium*, because these individuals held a perfect understanding of the irrational aspect of their behavior, showing no delusional character when practicing behaviors of extreme violence towards others or even themselves (Filho, Teixeira, & Dias, 2009). Nevertheless, the term psychopathy was implemented by Koch, from the German School of Psychiatry (Nunes, 2009).

Over the 19th and 20th centuries many studies have been conducted. However, controversy and the lack of specificity have remained up to the 40s of the last century. The term psychopathy became commonly used and better defined only in 1941, thanks to Hervey Cleckley's (1988) work. In *The Mask of Sanity* (1988), Cleckley describes the clinical picture of a psychopath, by identifying 16 characteristics observed in individuals who suffer from this personality disorder. However, Cleckley argued that the 16 characteristics did not have to be all mandatorily observed in some psychopaths. Therefore, the characteristics which may be patent in a psychopath are: superficial charm and high IQ; absence of delusions and other signs of irrational thinking; absence of nervousness and psychoneurotic manifestations; unreliability; tendency to lie and falsehood; lack of remorse or shame; inadequately motivated antisocial behavior; depleted judgment and failure to learn from experience; pathological egocentricity and incapacity to love; widespread poverty in terms of affective reactions; specific loss of insight; lack of reciprocity in interpersonal relationships; unrealistic and adverse behavior under the influence of alcohol and sometimes without such influence; suicide threats rarely carried out; impersonal, trivial, and poorly integrated sex life; and failure to follow a life plan.

However, there are other biological, cognitive, affective, and behavioral characteristics of the antisocial personalities associated to psychopathy. For example:

1. Biological dimension: hypo-reactivity of ANS (SMA) (individuals have greater ease not responding to aversive stimuli, and show deficits in processing sensory stimuli); sub cortical activation.
2. Cognitive dimension: real vs. abstract thinking; deficit alternative thinking, deficient alternative thinking; deficient locus of control (personality factor defined as the belief that our actions influence the results that we experience in life); cognitive distortions (total or partial denial, deny, minimize, etc.).
3. Emotional and affective dimension: insensitivity/affective shallowness (general lack of concern for the negative consequences of their actions and inexistence of remorse or guilt, inability to experience emotions or affections, low anxiety); egocentricity; impersonal relationships, low self-esteem.
4. Behavioral dimension: aggressiveness, impulsivity, falsehood/manipulation.

According to Hare (1996), (primary) psychopathy is a severe mental disorder marked by a character deviation, absence of genuine feelings,

coldness, insensitivity to other's feelings, manipulation, egocentricity, lack of remorse and guilt for cruel acts, and inflexibility with punishments. Although psychopathy is more frequent in males, it also affects women, in diverse levels, though with different and less specific characteristics than psychopathy affecting men.

Psychopathy seems to be related with important brain dysfunctions. Thus, it is important to consider that one single factor cannot be totally enlightening about the cause of the disorder. There seems to be a junction of components. Although some individuals with slight psychopathy have not experienced traumatic situations, the disorder, especially in severe cases such as sadists and serial killers, seems to be linked to three main factors: brain/biological dysfunctions or neurological trauma, genetic predisposition and sociopsychological traumas in childhood (e.g., emotional, sexual, physical abuse; neglect; violence; conflicts and parents' divorce). As a rule, violent antisocial individuals evidence a history of one of these components in their background, including those who reveal genetic predisposal. However, not every individual who has suffered some kind of abuse or loss in childhood will become a psychopath. Particularly when some genetic influence or some brain dysfunction that predisposes to antisocial behavior does not exist. Likewise, one cannot say that every psychopath is born with characteristics that will determine their criminal behavior. Therefore, the junction of the three factors is essential. We must take into account: genetics, psychosocial conditions, and dysfunctions in the brain (especially in the prefrontal lobe and limbic system).

Blackburn and Coid (1998) developed an interesting typology for psychopathy subtypes. Initially, they created a distinction between two types of psychopaths, both sharing a high degree of impulsivity: a *primary type*, characterized by a proper socialization and a total lack of emotional disturbances, and a *secondary type*, characterized by social isolation and neurotic traits. Despite all the typological variations from different authors, all seem to agree on the nuclear characteristics of the concept: impulsivity and lack of feelings of guilt or regret.

The *primary psychopaths* are characterized by impulsive, aggressive, hostile, extrovert traits. They are also confident about themselves, and have low levels of anxiety. In this group predominate narcissistic, histrionic, and antisocial people, but not necessarily criminal. Personalities from the political world, security forces, extreme sports, etc. may be considered in this group. *Primary psychopaths* evidence greater forethought and firmest convictions to commit crimes than *secondary psychopaths*, particularly the ones of the instrumental type. These also show more autonomic and cortical arousal, and greater tendency to sensation-seeking.

Secondary psychopaths are usually hostile, irresponsible, impulsive, aggressive, socially anxious, isolated, avoidant, dependent, distrustful, moody, and have low self-esteem. They are individuals whose antisocial behaviors are more reactive than instrumental. They might be identified with eccentric leaders of sects, cults, and associations. Their crimes tend to be unplanned and they think little of the consequences. *Secondary psychopaths* tend more to commit minor crimes, such as robbery. They are moody and aggressive, and have trouble tolerating boredom, which is why they keep looking for new sensations. These psychopaths show more fury before a threat, either physical or verbal, than primary psychopaths.

2. Assessment of psychopathy

Hare published several articles, book chapters, and books on the theme. We may find among them the classics *Psychopathy: theory and research* (Hare, 1970), and *Without conscience: the disturbing world of the psychopaths among us* (Hare, 1993, reissue Hare, 1999). Hare speaks to international audiences about every aspect of psychopathy, from personality and vulnerability assessment to risk factors of psychopaths in the community. He believes that psychopaths are the most destructive members of society and the most dangerous type of person. According to Hare (1996), since psychopaths represent more than 1% of the

population, it is important for us to focus on psychopathy. Hare (1999) published the book *Without Conscience* with the intention of warning people in general about this kind of predator, and helping those whose lives have been harmed as a result of dealing with a psychopath. He was convinced that it is vital that people in general learn to identify a psychopath who may be too close to them, for their own protection.

Too many people think that psychopaths are basically killers or convicts. The general public has not been taught to see beyond social stereotypes and neither to understand that psychopaths may be professionally successful individuals, who have never been in a prison and have never committed violent crimes. The fact that psychopaths commit reprehensible attitudes often that does not necessarily mean that those attitudes are criminal: they exploit people and leave them in need. They prove to be treacherous employees, intriguing businessmen, employees who use their professional position to victimize people and to enrich at their expense, and lovers who despise the other (Ramsland, 2005). The personality structure, and the propensity to an unethical relationship with others, is a common factor of psychopaths, criminals or not criminals.

Psychopaths lack the qualities that people need to lead a harmonious and virtuous life. Hare (1996) predicted (moderately) that there are over two million psychopaths among North Americans. According to Ramsland (2005) “psychopathy” may “touch practically every one of us”. Although not every murderer is a psychopath, and neither every psychopath is a killer, Hare (1996) presented a description of cases of unscrupulous killers who do not seem to have any respect or human feeling for their victims. He refers John Wayne Gacy, Ted Bundy, Joe Hunt, Clifford Olson, and Diane Downs among them. Gacy murdered at least 33 young people and buried most of the bodies in his house's basement. Bundy killed more than two dozen girls in the 70s. Hunt coaxed a group of young people into a scheme of banknotes counterfeit, which resulted in the murder of several youngsters. Olson manipulated the Canadian government to pay him a generous amount to show where he had buried his victims. Downs shot and killed her two children, in order to seduce a man who did not want her, and then played the victim (Ramsland, 2005).

Recent findings on the neuronal plasticity and the possibility of neuromodulation at early ages cherish the hope of someday developing efficient prevention protocols (Raine & Yang, 2006; Ramsland, 2005), particularly when there are valid and reliable instruments for detecting early signs of psychopathy in children (Johnstone & Cooke, 2006). In a segment of *The Mind*, a documentary from PBS (Public Broadcasting Service) focusing on many behavioral and brain aspects, Hare (1999) assesses “Al”, a middle-aged man with 46 convictions for criminal acts, from drug abuse to bank robberies. Through a neurological diagnostic test, which aimed to exclude the possible existence of a palpable brain injury, the Hare's team administered tests to Al that measure language processing. In this case, like in all others he had been studying, Hare found no data to confirming that psychopathy is caused by a brain injury. However, he argues that “there are anomalies in the way psychopaths process information” (Hare, 1999).

Hare (1999) conducted a study with fMRI (functional magnetic resonance imaging) using neutral illustrations and unpleasant murder scenes. The non-psychopathic criminals revealed a great activation of the amygdala (before unpleasant scenes, as opposed to neutral illustrations), drawing attention to this fact. According to Hare (1999), “in psychopathy, there is nothing. But there was greater activation in the same brain areas that were hyperactive during the presentation of emotionally charged words. It is as if they are processing emotional facts in extra-limbic regions”. It might be something more generic than just emotional information. In another neurological study with fMRI, there were deserved parts of the brain used in words' real and abstract processing. Non-psychopathic individuals showed increased activation in the anterior/superior right temporal cortex. The same did not happen with psychopaths (Ramsland, 2005).

Psychopathy assessment, in terms of the intensity with which certain personality and behavior characteristics are observed in an individual, ignite a discussion about the nature of this phenomenon: whether it is categorical (typological) or dimensional. In the first case, differences between the psychopathic individual and the other individuals would be qualitative. In the second they would be quantitative. This issue arose quite early in the empirical tradition (Hare, 1970). From the typological perspective, psychopathy would be *taxon*, in other words, a non-arbitrary class or entity (such as gender or species). Meanwhile, from the dimensional perspective, the characterization of psychopathy is defined in terms of a *continuum* along which every individual can be disposed. Taximetrics analysis investigations showed results both in favor of the typological perspective (Harris, Rice, & Quinsey, 1994; Skilling, Harris, Rice, & Quinsey, 2002), as the dimensional one (Guay, Ruscio, Knight, & Hare, 2007; Walters, Duncan, & Mitchell-Perez, 2007; Walters et al., 2007). However, the current empirical evidence is more favorable for the dimensional view.

The dimensional conception of psychopathy implies that there are no psychopathic individuals in the categorical and exclusive meaning of the term. Thus, all people may have a greater or lesser degree of personality traits theoretically related to the construct, and there would be a *continuum* distribution of these characteristics in the general population. Therefore, the dimensional conception admits some ambiguity in the frame characterization, as it depends on the intensity and comprehensiveness of behavioral and personality characteristics evidenced by an individual. Consequently, literature has been recommending caution with the cutoffs to classify individuals as psychopaths and non-psychopaths through psychometric instruments (Walters, Duncan, & Mitchell-Perez, 2007; Walters, Gray, et al., 2007). Cutoffs are arbitrary, lacking accurate empirical justification. Its use is potentially dangerous in situations where the evaluation results have a direct impact on the lives of individuals, as in forensic and institutional contexts (Walters, Duncan, & Mitchell-Perez, 2007; Walters, Gray, et al., 2007). The very use of the term *psychopath* is questionable, since it seems to establish a category of individuals distinct from the others, which makes no sense, taking into account recent results in favor of the dimensional perspective (Guay et al., 2007; Walters, Duncan, & Mitchell-Perez, 2007; Walters, Gray, et al., 2007). Therefore, it seems more appropriate to speak of *individuals with strong features of psychopathic personality* instead of *psychopath*.

The difficulty in defining the operational limits of psychopathy also intensifies the question about the legitimacy of the construct. Consequently, what would be the advantage of studying psychopathy and use that term? The answer can be found in the very history of the construct: the term came to designate frames of extreme antisocial behavior, usually associated with violent and barbarian crimes, in which the reason faculties did not seem impaired. Today, it designates the antisocial behavior associated with personality disruptive traits (Hare, 2006). That is, although the boundaries of the concept are not clear, its existence and the permanence of its use in the scientific and forensic community show us that it is useful to discriminate behavioral and psychological frames that draw attention, and whose identification and understanding are relevant to human relationships. That is, although the boundaries of the concept are not too sharper, its existence and the permanence of its use in the scientific community and forensic show us that it is useful to appoint or to discriminate behavioral and psychological frames that draw attention, and whose identification and understanding are relevant to human relationships. It is important to stress that antisocial behavior is an essential component to define psychopathy, not criminality. The antisocial behavior can include crimes or violations of laws, but it does not come down to it. It also covers exploration behaviors in interpersonal relationships that are not actually considered criminal offenses. That is why modern conceptions of psychopathy consider essential the inclusion of personality characteristics that underlie the antisocial behavior of psychopathic type, as mentioned earlier, corresponding to the interpersonal and affective dimensions of

the PCL-R (*Psychopathy Checklist-Revised* (PCL-R)) (Hare, 2006; Hare & Neumann, 2008).

The study of psychopathy has moved from the exploration of the relationship between this variable and other psychological and behavioral indicators. For instance, there are reports of associations between little attention to look and reduced feeling of fear in children with psychopathic traits (Dadds, Marsry, Wimalaweera, & Guastella, 2008). Negative relationships between psychopathy and cooperation tasks (Rilling et al., 2007), recognition of affection in facial expressions (Hastings, Krishnan, Tangney, & Stuewig, 2011), and affective and semantic priming (Blair, Peschardt, Budhani, Mitchell, & Pine, 2006) are also pointed out. Yet, psychopathy seems to be a moderator between verbal skills and antisocial behavior in adolescents (Muñoz, Frick, Kimonis, & Aucoin, 2008). A review of the relationships between psychopathy and several structural abnormalities in the brain can be found in Weber, Habel, Amunts, and Schneider (2008).

3. The self-report measures in the assessment of psychopathy

For a long time the justice system has been waiting for the day technicians will provide the ability to identify which young offenders are more or less amenable to rehabilitation, as well as the probability of them becoming psychopaths. What is certain is that the concepts and the tools developed had only considered the adult, and the concept and measures of psychopathy to children and adolescents are beginning to be implemented (Seagrave & Grisso, 2002). The same authors emphasize the concern with the potentially premature use of the concept of psychopathy and the respective measures in these populations (children and adults) by professionals in court, since there may occur more false negative types in adolescence than in adulthood. In these legal and clinical contexts, there is a widespread use of psychopathy as a diagnosis, so it is imperative that psychologists master literature and research in this area, before getting involved in this field (Edens, 2006).

More recently, there is a potential attempt to build self-report questionnaires with measures of the psychopathy traits (Copestake, Gray, & Snowden, 2011). There is, however, a concern among researchers regarding the validity of self-report measures in the field, due to the characteristics of this disorder, such as lying and manipulative style (Ray et al., 2013a).

A study of Copestake et al. (2011), using PCL-R and PPI-R (*Psychopathic Personality Inventory-Revised*), examined the relationship between these two self-report measures of psychopathy, and suggest that they do not measure the same conceptualization of psychopathy. This means that they are not interchangeable: each one of these instruments provides a different basis for the concept of psychopathy, which perhaps might be due to the different concepts of psychopathic traits that hold instruments, or to an inability of psychopaths in relation to inform about their emotions and their interpersonal behaviors. However, regarding the level of populations embedded in the community (non-institutional), PPI-R proves to be an instrument of simplified use, which results from the fact that self-report measures, regarding psychopathy, are influenced by the instability of the relationships between its factors (Seibert, Miller, Few, & Lynam, 2011). Leveson's self-report psychopathy scale (LSRP, 1995) is considered a reliable and valid measure for the diagnosis of psychopathy in institutionalized populations. However, in the future, it is necessary to validate this scale in successful psychopaths, who have a great probability of having a pattern of personality without comorbidity of antisocial behaviors (Lynam, Whiteside, & Jones, 1999).

Krueger, Markon, Patrick, Benning, and Kramer's (2007) Externalizing Spectrum Inventory (ESI) is another self-report instrument of psychopathy, which was developed for indexing behavioral problems and traits associated with impulse control difficulties. The results of a validation study of the total ESI (2007) and its factorial scores, regarding measures of externalizing symptoms in children and adult population

with deviant behavior and drug problems, provide strong evidence of the validity and potential utility of the ESI with respect to the corresponding neurobiological and etiological predispositions to externalizing (Venables & Patrick, 2012).

Book, Starzyk, Holden, Wasylkiw, and Edwards (2006) analyzed another concern in self-reporting inventories when weighting the possibility of psychopathic traits inducing a false experimental induction. The authors observed higher psychopathy scores in individuals who had been confirmed by the validity test, which causes a future concern with the fact that dissimulation may be less true in individuals with an ease to disappoint other and to commit of a range of behaviors against society. We conclude, however, that there is concern about the bias of positive response. However, we highlight the validity of self-report scales (Ray et al., 2013b), stressing that the self-reporting psychopathy measures are more effective, namely more interpretable when they include measures of personality, as in the example of the five factor model (Seibert et al., 2011).

Another arising issue is the consistency of PCL-R criteria for the classification of subjects with psychopathy, being that the rigor in the cutoff score of PCL-R ranges between several studies, which origins different psychopathic behaviors between the study groups, as well as differences in the interpretation of the neuroimaging data (Koenigs, Baskin-Sommers, Zeier, & Newman, 2011). In a study that has the objective of testing the hypothesis that professionals who label criminals as psychopaths also end up labeling these individuals as representing a high risk of violence and with fewer treatment options, a trend was found for the results of PCL-R to be associated with the results of judgment, and injunctive relief is necessary with regard to the use of the PCL-R in the testimony in court or in a context that presents himself as antinomic (Loyd, Clark, & Forth, 2010). PCL-R should be used with consciousness, preventing in this way a limitation for its future use (Edens, 2006).

With regard to psychopathology, there are still some ambiguous investigations, not always understood, and, although there is much to be evaluated and studied in psychopathy in different contexts, it is necessary to worry about its conceptualizations, which have been abusively used (Edens, 2006). It is imperative in research concerning this disorder to take into account the issue of the gap of not considering subgroups of psychopaths, which have different neurobiological profiles, for example, high-anxious, low anxious (Koenigs et al., 2011).

However, it is extremely important that the pursuit of knowledge on psychopathy makes possible early prevention and maintenance of public health (Seagrave & Grisso, 2002).

4. Intervention in psychopathy

Scientific knowledge about the problem stated that psychopaths have potential to worsen or improve with treatment. During treatment, they learn better techniques to manipulate the system to their advantage and make "mind games" with others.

According to Hare (2006), "technicians from the prison administration give this the sense that, not only they are not treatable, but also they tend to get worse". However, Hare (2006) evolved to a different interpretation of these results. The problem is that the traditional intervention programs are not specifically designed for psychopaths. They are designed for the average criminal.

While we do not have results on programs specifically designed for psychopaths, we have a new field of research.

5. Discussion

The study of psychopathy in the general population is empirically justified since the traits that define psychopathy are, in theory, shared by the entire population to a greater or lesser degree. Some authors use the terminology *unsuccessful criminal* for criminal psychopaths (captured by justice) and *successful* for those with high scores on measures of psychopathy, but with no criminal record (Raine et al., 2004;

Yang et al., 2005). This division starts from the premise that psychopathic traits may be adaptive in particular contexts. In a competitive environment, for example, it may be positive to be cold, non-empathetic, and aggressive towards one's opponents. Successful psychopaths seem to have interpersonal and affective psychopathic traits, but less antisocial behavior than criminal psychopaths. However, in a recent study we found no positive relationship between psychopathic traits and success in life in the general population (Ullrich, Farrington, & Coid, 2008). In fact, the relations found were negative. Thus, studies of psychopathic traits in the general population are still incipient and do not allow for reliable conclusions, meaning this a field that needs to be further investigated.

References

- Almeida, F. (1999). *Homicidas em Portugal*. Maia: Instituto Superior da Maia.
- American Psychiatric Association (1980). *DSM-III: Manual de diagnóstico e estatística das perturbações mentais*. Lisboa: Climepsi Editores.
- Berrios, G. (1996). *The history of mental symptoms. Descriptive psychopathology since the nineteenth century*. Cambridge: Cambridge University Press.
- Blackburn, R., & Coid, J. (1998). Psychopathy and the dimensions of personality disorder in violent offenders. *Personality and Individual Differences*, 25, 129–145.
- Blair, R., Peschardt, K., Budhani, S., Mitchell, D., & Pine, D. (2006). The development of psychopathy. *Journal of Child Psychology and Psychiatry*, 4, 262–275. <http://dx.doi.org/10.1111/j.1469-7610.2006.01596.x>.
- Bollone, P. (1992). *Cesare Lombroso ovvero il principio dell'irresponsabilità*. Torino: Società Editrice Internazionale.
- Book, A., Starzyk, K., Holden, R., Wasylkiw, L., & Edwards, M. (2006). Psychopathic traits and experimentally induced deception in self-report assessment. *Personality and Individual Differences*, 41, 601–608. <http://dx.doi.org/10.1016/j.paid.2006.02.011>.
- Cleckley, H. (1988). *The mask of sanity* (5th ed.). St Louis: Mosby.
- Copestake, S., Gray, N., & Snowden, R. (2011). A comparison of a self-report measure of psychopathy with the Psychopathy Checklist-Revised in a UK sample of offenders. *Journal of Forensic Psychiatry & Psychology*, 22(2), 169–182. <http://dx.doi.org/10.1080/14789949.2010.545134>.
- Dadds, M., Marsry, Y., Wimalaweera, S., & Guastella, A. (2008). Reduced eye gaze explains "fear blindness" in childhood psychopathic traits. *Journal of the American Academy of Child and Adolescent Psychiatry*, 47(4), 455–463. <http://dx.doi.org/10.1097/CHI.0b013e31816407f1>.
- Edens, J. (2006). Unresolved controversies concerning psychopathy: Implications for clinical and forensic decision making. *Professional Psychology: Research and Practice*, 37(1), 59–65. <http://dx.doi.org/10.1037/0735-7028.37.1.59>.
- Filho, N., Teixeira, M., & Dias, A. (2009). Psicopatia: o Construto e sua Avaliação. *Avaliação Psicológica*, 8(3), 337–346.
- Guay, J., Ruscio, J., Knight, R., & Hare, R. (2007). A taxometric analysis of the latent structure of psychopathy: Evidence for dimensionality. *Journal of Abnormal Psychology*, 116(4), 701–716.
- Hare, R. (1970). *Psychopathy theory and research*. New York: Wiley & Sons.
- Hare, R. (1996). Psychopathy: A clinical construct whose time has come. *Criminal Justice and Behavior*, 23, 25–54. <http://dx.doi.org/10.1177/0093854896023001004>.
- Hare, R. (1999). *Without conscience: The disturbing world of the psychopaths among us*. New York: The Guilford Press.
- Hare, R. (2006). *Robert Hare's web site devoted to the study of psychopathy*. (Retrieved from <http://www.hare.org>).
- Hare, R., & Neumann, C. (2008). Psychopathy as a clinical and empirical construct. *Annual Review of Clinical Psychology*, 4, 217–246. <http://dx.doi.org/10.1146/annurev.clinpsy.3.022806.091452>.
- Harris, G., Rice, M., & Quinsey, V. (1994). Psychopathy as a taxon: Evidence that psychopaths are a discrete class. *Journal of Consulting and Clinical Psychology*, 62, 387–397. <http://dx.doi.org/10.1037/0022-006X.62.2.387>.
- Hastings, M., Krishnan, S., Tangney, J., & Stuewig, J. (2011). Predictive and incremental validity of Violence Risk Appraisal Guide scores with male and female jail inmates. *Psychological Assessment*, 23, 174–183. <http://dx.doi.org/10.1037/a0021290>.
- Johnstone, L., & Cooke, D. (2006). Traços de psicopatia na infância: Operacionalização do conceito e sua avaliação. In A. Castro Fonseca (Eds.), *Psicologia Forense* (pp. 401–436). Coimbra: Coimbra Editora.
- Koenigs, M., Baskin-Sommers, A., Zeier, J., & Newman, J. (2011). Investigating the neural correlates of psychopathy: A critical review. *Molecular Psychiatry*, 16, 792–799. <http://dx.doi.org/10.1038/mp.2010.124>.
- Krueger, R., Markon, K., Patrick, C., Benning, S., & Kramer, M. (2007). Linking antisocial behavior, substance use, and personality: An integrative quantitative model of the adult externalizing spectrum. *Journal of Abnormal Psychology*, 116, 645–666. <http://dx.doi.org/10.1037/0021-843X.116.4.645>.
- Levenson, M., Kiehl, K., & Fitzpatrick, C. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, 68(1), 151–158.
- Loyd, C., Clark, H., & Forth, A. (2010). Psychopathy, expert testimony, and indeterminate sentences: Exploring the relationship between psychopathy checklist-revised testimony and trial outcome in Canada. *Legal and Criminological Psychology*, 15, 323–339. <http://dx.doi.org/10.1348/135532509X468432>.
- Lynam, D., Whiteside, S., & Jones, S. (1999). Self-reported psychopathy: A validation study. *Journal of Personality Assessment*, 73(1), 110–132. <http://dx.doi.org/10.1207/S15327752JPA730108>.
- Muñoz, L., Frick, P., Kimonis, E., & Aucoin, K. (2008). Types of aggression, responsiveness to provocation, and callous-unemotional traits in detained adolescents. *Journal of Abnormal Child Psychology*, 36, 15–28. <http://dx.doi.org/10.1007/s10802-007-9137-0>.
- Murray, R. (1997). *The essentials of postgraduate psychiatry* (3rd ed.). Cambridge: Cambridge University Press.
- Nunes, L. (2009). Crime — Psicopatia, sociopatia e personalidade anti-social. *Revista da Faculdade de Ciências Humanas e Sociais do Porto*, 6, 152–161.
- Raine, A., Ishikawa, S., Arce, E., Lencz, T., Knuth, K., Bihrl, S., et al. (2004). Hippocampal structural asymmetry in unsuccessful psychopaths. *Biological Psychiatry*, 55(2), 185–191. [http://dx.doi.org/10.1016/S0006-3223\(03\)00727-3](http://dx.doi.org/10.1016/S0006-3223(03)00727-3).
- Raine, A., & Yang, Y. (2006). The neuroanatomical basis of psychopathy: A review of brain imaging findings. In Christopher J. Patrick (Ed.), *Handbook of Ramsland. Psychopathy*. (pp. 278–295). New York: Guilford Press (Retrieved from http://www.crimelibrary.com/criminal_mind/psychology/robert_hare/index.html).
- Ramsland, K. (2005). *Handbook of psychopathy*. (Retrieved from http://www.trutv.com/library/crime/criminal_mind/psychology/robert_hare/index.html).
- Ray, J., Hall, J., Poythress, N., Rivera-Hudson, N., Lilienfeld, S., & Morano, M. (2013a). The relation between self-reported psychopathic traits and distorted response styles: A meta-analytic review. *Personality disorders: Theory, research, and treatment*, 4(1), 1–114. <http://dx.doi.org/10.1037/a0026482>.
- Ray, J., Hall, J., Poythress, N., Rivera-Hudson, N., Lilienfeld, S., & Morano, M. (2013b). Investigating the neural correlates of psychopathy: A critical review. *Molecular Psychiatry*, 16, 792–799. <http://dx.doi.org/10.1038/mp.2010.124>.
- Rilling, J., Glenn, A., Jairam, M., Pagnoni, G., Goldsmith, D., Elfenbein, H., et al. (2007). Neural correlates of social cooperation and non-cooperation as a function of psychopathy. *Biological Psychiatry*, 61, 1260–1271. <http://dx.doi.org/10.1016/j.biopsych.2006.07.021>.
- Schneider, K. (1943). *Las personalidades psicopáticas*. Madrid: Ediciones Morata.
- Seagrave, D., & Grisso, T. (2002). Adolescent development and the measurement of juvenile psychopathy. *Law and Human Behavior*, 26(2), 219–239. <http://dx.doi.org/10.1023/A:1014696110850>.
- Seibert, L., Miller, J., Few, L., & Lynam, D. (2011). An examination of the structure of self-report psychopathy measures and their relations with general traits and externalizing behaviors. *Personality disorders: Theory, research, and treatment*, 3(2), 193–203. <http://dx.doi.org/10.1037/a0019232>.
- Skilling, T., Harris, G., Rice, M., & Quinsey, V. (2002). Identifying persistently antisocial offenders using the Hare Psychopathy Checklist and the DSM antisocial personality disorder criteria. *Psychological Assessment*, 14, 27–38. <http://dx.doi.org/10.1037/1040-3590.14.1.27>.
- Ullrich, S., Farrington, D., & Coid, J. (2008). Psychopathic personality traits and life-success. *Personality and Individual Differences*, 44(5), 1162–1171. <http://dx.doi.org/10.1016/j.paid.2007.11.008>.
- Venables, N., & Patrick, C. (2012). Validity of the externalizing spectrum inventory in a criminal offender sample: Relations with disinhibitory psychopathology, personality, and psychopathic features. *Psychological Assessment*, 24(1), 88–100. <http://dx.doi.org/10.1037/a0024703>.
- Walters, G., Duncan, S., & Mitchell-Perez, K. (2007). The latent structure of psychopathy: A taxometric investigation of the Psychopathy Checklist-Revised in a heterogeneous sample of male prison inmates. *Assessment*, 14(3), 270–278.
- Walters, G., Gray, N., Jackson, R., Sewell, K., Rogers, R., Taylor, J., et al. (2007). A taxometric analysis of the Psychopathy Checklist: Screening version (PCL: SV): Further evidence of dimensionality. *Psychological Assessment*, 19(9). <http://dx.doi.org/10.1037/1040-3590.19.3.330>.
- Weber, S., Habel, U., Amunts, K., & Schneider, F. (2008). Structural brain abnormalities in psychopaths — A review. *Behavioral Sciences & The Law*, 26(1), 7–28. <http://dx.doi.org/10.1002/bsl.802>.
- Yang, Y., Raine, A., Lencz, T., Bihrl, S., LaCasse, L., & Colletti, P. (2005). Volume reduction in prefrontal gray matter in unsuccessful criminal psychopaths. *Biological Psychiatry*, 57(10), 1103–1108. <http://dx.doi.org/10.1016/j.biopsych.2005.01.021>.