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<ct>The Psychological Treatment of Psychopathy

<cs>Theory and Research

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<pf>The psychological treatment of psychopathy is rife with controversy and conceptual disagreement. Indeed, researchers have yet to come to a clear consensus regarding the definition of psychopathy, including the boundaries of the construct and how best to assess its features (Lilienfeld, 1998; Lilienfeld, Watts, Smith, Berg, & Latzman, 2015). In the absence of an agreed-upon conceptualization, the literature on the treatment of psychopathy is abundant with competing approaches to assessing and diagnosing psychopathy, treatment methods, and outcome measures. Moreover, although a variety of treatment approaches have been described in the literature, few have been based on well-articulated etiological theories of psychopathy, and most involve nonexplicit or theoretically questionable mechanisms of change (Salekin, 2002; Salekin, Worley, & Grimes, 2010). As such, the scientific rigor of treatment designs and of the assessment of treatment efficacy is limited. This is not to say that the scientific treatment of psychopathy is unattainable, as treatment programs that are grounded firmly in scientifically informed etiological theories have evidenced at least some success (Andrews & Bonta, 2010; Antonowicz & Ross, 1994). Nevertheless, the scientific status of the treatment of psychopathy hinges largely on the development of an agreed-upon conceptualization of the construct, from which theoretically sound treatments can be advanced and rigorously tested.

The purpose of this chapter is to investigate the evidentiary basis of the treatment of psychopathy, in terms of both the effectiveness and the theoretical bases of alternative treatment approaches. First, before discussing these approaches, a brief discussion of psychopathy's differing conceptions over time is needed. These conceptual differences concerning the definition and measurement of psychopathy are especially pertinent to treatment evaluations, as differences in the operationalization of psychopathy bear directly on evaluations of efficacy. Second, we review long-standing negative views regarding psychopathy's treatability, as well as features of psychopathy that present potential barriers to its treatability. Third, we summarize methodological differences among treatment investigations, some of which preclude clear-cut conclusions regarding psychopathy's amenability to treatment. Fourth, we review approaches to the treatment of psychopathy as well as empirical evidence for such approaches. Fifth and finally, we discuss the clinical and research implications of these findings. The present chapter aims to show that, in light of methodological issues rampant in this literature, compelling evidentiary support for specific approaches to the treatment of psychopathy is lacking. Nevertheless, several promising avenues to the scientific treatment of psychopathy exist (Lösel, 1998; Salekin, 2002; Salekin et al., 2010).

<a>11.1 Conceptualizing and Measuring Psychopathy

<pf>In stark contrast to most domains of psychopathology research, marked disagreement exists in the field of psychopathy regarding the fundamental conceptualization and operationalization of the construct. This lack of consensus has persisted for decades, even in light of promising advances in the field concerning psychopathy's assessment and diagnosis (Lilienfeld, 1998; Lilienfeld et al., 2015), its neuroscientific correlates (Glenn & Raine, 2013), and the genetic and environmental architecture associated with psychopathy (Latzman, Patrick, Freeman, Schapiro, & Hopkins, 2017; Skeem, Polaschek, Patrick, & Lilienfeld, 2011). Ideally, interventions for psychopathy, indeed for all forms of psychopathology, would be designed based on a scientifically rigorous understanding of the construct. Nevertheless, although progress has been made, this goal has been largely unobtainable given that the field lacks a clear consensus regarding what psychopathy is.

The current view of psychopathy is based on research and theory developed over the past century. Hervey Cleckley's clinical description of psychopathy, first published the early 1940s, is almost certainly the most influential. Cleckley (1941/1988) offered a clear definition of psychopathy and its interpersonal, affective, and behavioral attributes, and vivified these features through descriptive case studies. Through his work with psychiatric patients, Cleckley delineated 16 criteria that he believed captured the essence of the prototypical psychopath. According to Cleckley, psychopathy is characterized by superficial charm, guiltlessness, callousness, dishonesty, egocentricity, lack of emotions such as love and anxiety, lack of insight, poor judgment, and failure to follow a coherent life plan. Although not explicitly linked to trait models of personality, Cleckley's criteria are clearly related to personality dispositions. An important aspect of Cleckley's conceptualization is the weight placed on seemingly positive social adjustment. According to Cleckley, the prototypical psychopath exhibits a chameleon-like nature. On the surface, he or she is charming and makes a positive impression on others, yet on the inside, he or she is deeply affectively impoverished. Moreover, although Cleckley recognized unmotivated antisocial behavior as associated with psychopathy, he did not regard antisocial and criminal behavior to be a necessary feature of the construct (Cleckley, 1941/1988). Although it is not clear to what extent Cleckley's descriptions of psychopathy directly influenced early editions of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM; see Millon, 2011), a largely personality-based conceptualization of psychopathy appeared in the first version of the DSM as "sociopathic personality disturbance" (American Psychiatric Association [APA], 1952, p. 38), which included individuals previously considered to have a "psychopathic personality" (APA, 1952, p. 38). The description of "antisocial personality" appeared in the second version of the DSM (APA, 1968, p. 43). This description was somewhat more in line with Cleckley's (1941/1988) psychopathy concept, and emphasized selfishness, irresponsibility, impulsivity, lack of loyalty, callousness, guiltnessness, failure to learn from punishment, and low frustration tolerance. Importantly, although recognized as a potential behavioral indicator, antisocial behavior was considered neither necessary nor sufficient to justify a diagnosis in the DSM-II (APA, 1968).

Although Cleckley's views remain influential to this day, the field has drifted from his conceptualization. Cleckley provided no specific methods for a reliable diagnosis of psychopathy, and the lack of standardization of his criteria impeded early scientific progress. Moreover, the DSM-II's diagnoses of most mental disorders were notoriously unreliable, as classifications were based on clinical impressions of patients without explicit guidelines (Spitzer, Williams, & Skodol, 1980). With the field in need of reliable methods by which to assess all disorders, including psychopathy, competing conceptualizations of psychopathy placed a greater focus on indexing the behaviors rather than the personality features associated with the construct (Cloninger, 1978; Robins, 1966). This behavior-based approach was influenced primarily by the work of Robins (1966), who systematically examined over 500 individuals who, as juvenile delinquents 30 years prior, had received services at a child guidance clinic. Robins was interested in "sociopathic" personality disorder, and, although she noted difficulties in both terminology and definition, she considered sociopathic personality to be closely related to Cleckley's (1941/1988) concept of psychopathy. She advanced a list of 19 items specific to sociopathic personality, many with very specific requirements for assessment. Her list included several of Cleckley's psychopathy items as well as additional behavioral items such as drug and alcohol use and suicide attempts, as it was believed that these features could be more reliably assessed than affective criteria (e.g., lack of remorse). As a result of this work, and follow-up work by

Feighner et al. (1972), the diagnosis of the condition shifted to include specific and explicit criteria. An illustration of this shift was the virtually wholesale removal of the personality-based descriptions from subsequent versions of the DSM. The DSM-III (APA, 1980) included a primarily behavioral-based description of antisocial personality disorder (ASPD), which relied heavily on a history of readily observable antisocial behaviors that originated in childhood and persisted into adulthood (e.g., theft, vandalism, cruelty to animals). With the DSM-III-R (APA, 1987) came the addition of the criterion "lacks remorse," and, although this criterion alluded to some psychopathic personality traits, the description remained behavioral overall. Although the DSM-IV field trial for ASPD revealed admittedly mixed evidence for the incremental contribution of personality-based criteria in the assessment of psychopathy and ASPD (Widiger et al., 1996), such features were not incorporated into the DSM-IV description of ASPD (APA, 1994), which has remained identical in the DSM-5 (APA, 2013). Nevertheless, psychopathy now appears in the DSM-5 but only as a specifier, termed "with psychopathic features" to denote a distinct variant of the diagnosis of ASPD in Section III, "Emerging Measures and Models." This specifier emphasizes the boldness features of psychopathy—namely, those linked to low levels of social fear and high emotional resilience (Anderson, Sellbom, Wygant, Salekin, & Krueger, 2014). This reemergence of the psychopathy construct in the current version of the DSM represents a long awaited step forward; yet, the ASPD diagnosis, ostensibly the closest counterpart to psychopathy in the manual, is still conceptually and empirically wedded to antisocial behaviors. Although the terms "antisocial personality," "sociopathy," and "psychopathy" are theoretically related and are frequently used interchangeably, they are empirically and conceptually separable constructs (e.g., Walsh & Wu, 2008). Moreover, the many operationalizations of these constructs place varying emphases on antisocial behaviors versus personality features. Thus, when evaluating psychopathy treatment research, it is important to consider whether the operationalization of the construct is primarily based on behavior or personality.

An important development in the field of psychopathy, and particularly in the standardization of diagnostic criteria, began in the 1980s with the research program of Canadian psychologist Robert Hare, who initiated the construction of a reliable and construct-valid measure of psychopathy. The Psychopathy Checklist (PCL; Hare, 1980) initially relied heavily on Cleckley's criteria, but, through an iterative process of test construction, features related to positive social adjustment were largely eliminated, and additional features such as antisocial and criminal behaviors were included. After undergoing revisions, the PCL became the Psychopathy Checklist–Revised (PCL-R), now the most commonly used and extensively validated measure of psychopathy (Hare & Neumann, 2008). The PCL-R has been adapted and extended downwardly to adolescents (the Psychopathy Checklist: Youth Version, or PCL: YV; Forth, Kosson, & Hare, 2003) and to nonclinical samples (the Psychopathy Checklist: Screening Version, or PCL: SV; Hart, Cox, & Hare, 1996). Although the PCL-R was designed to index psychopathy as a single, total score (Hare & Neumann, 2008), research has increasingly focused on two broad factor-analytically-derived dimensions (Harpur, Hare, & Hakstian,1989). Whereas Factor I assesses the core interpersonal and affective features of psychopathy, including grandiose sense of self-worth, lack of guilt, and callousness, Factor II assesses an antisocial and impulsive lifestyle (Hare, 1991/2003). More fine-grained factor models of the PCL-R have also been developed, such as three-factor (Cooke & Michie, 2001) and four-factor (Hare, 1991/2003) models. The PCL and its derivatives have contributed profoundly to the field of psychopathy research. Yet, several have criticized the field's heavy reliance on a single measure, observing that the PCL-R is an

assessment tool that should not be substituted as a theoretical model for psychopathy (e.g., Logan, Rypdal, & Hoff, 2012; Skeem & Cooke, 2010). Moreover, the PCL tools place a significant emphasis on antisocial behavior, and the psychopathy construct assessed by these measures has drifted from Cleckley's 16 criteria.

The core features and structure of psychopathy continue to be debated. Specifically, consensus has yet to be reached on whether psychopathy is unidimensional or multidimensional at a higher-order level (e.g., Neumann, Hare, & Newman, 2007; Neumann, Malterer, & Newman, 2008). Further, opinions differ regarding the specific features of psychopathy. For example, one actively debated issue is whether certain adaptive features, such as boldness, are relevant to psychopathy (e.g., Lilienfeld et al., 2012; Lilienfeld et al., 2016; Lynam & Miller, 2012; Miller & Lynam, 2012; Patrick, Venables, & Drislane, 2013). Potentially most relevant when considering the evaluation of treatments, disagreement persists regarding whether antisocial behaviors are an integral feature of psychopathy (Hare & Neumann, 2010) or are simply correlates or sequelae of psychopathy (Skeem & Cooke, 2010).

Without an agreed-upon operationalization of psychopathy, prevalence rates are difficult to estimate. Moreover, prevalence rates assume a dichotomous cut point between "psychopath" and "nonpsychopath." Regardless of how psychopathy is conceptualized, taxometric research suggests psychopathy is dimensional rather than categorical, meaning that no clear diagnostic cut point exists (e.g., Edens, Marcus, Lilienfeld, & Poythress, 2006; Marcus, John, & Edens, 2004; cf. Harris, Rice, & Quinsey, 1994). Nonetheless, current estimates of the prevalence of psychopathy in adults are based largely on scores from the PCL-R or its variants. For example, a US study reported that 1.2% of a sample scored within 13 and 24 on the PCL: SV, an indication of "potential psychopathy" (Neumann & Hare, 2008). Similarly, a British study reported a community prevalence rate of 0.6% scoring higher than 13 on the PCL: SV (Coid et al., 2009). Prevalence rates in incarcerated adults are significantly higher; for example, high rates of ASPD (50–80%) have been observed in prison populations, with 20% of these individuals meeting criteria for psychopathy based on the PCL-R (Hare, 1998).

<a>11.2 Is Psychopathy Treatable? A History of Negative Opinion

<pf>In light of the aforementioned debates regarding the conceptualization and definition of psychopathy, conclusions regarding psychopathy's amenability to treatment are tenuous. Traditionally, popular clinical opinion holds that psychopathy is untreatable, a belief similarly rampant among researchers for many years. Salekin (2002) aptly summarized the state of the field when he noted, "Clinical lore has led clinicians and researchers to believe that psychopathy is, essentially, an untreatable syndrome" (p. 79). Indeed, after years of working with individuals with psychopathy, Cleckley highlighted the elusiveness of successful treatment for psychopathy: "We do not at present have any kind of psychotherapy that can be relied upon to change the psychopath fundamentally" (p. 478). Later reviewers echoed this pessimistic sentiment (e.g., Suedfeld & Landon, 1978) and others have similarly questioned the treatability of psychopathy (e.g., Lösel, 1998), although many have noted that the lack of empirical support for specific treatment approaches does not necessarily provide evidence that psychopathy is untreatable (Blackburn, 1993; D'Silva, Duggan, & McCarthy, 2004; Lösel, 1998).

The challenges of conducting psychotherapy with individuals high in psychopathy have been documented for years (e.g., Doren, 1987; Eissler, 1949; Yochelson & Samenow, 1977). For psychotherapy to be effective, the patient should be able to form emotional connections with others, including the therapist; however, the classical psychopath is largely or entirely incapable

of such interpersonal connectedness (e.g., Cleckley, 1941/1988; Hare, 1996; Yochelson & Samenow, 1977). Moreover, psychopaths' tendency to engage in pathological lying, manipulation, and deception, as well as their proneness to boredom and resistance to accepting responsibility for their actions, all present significant barriers to treatment progress (Lösel, 1998). Further, individuals with psychopathy are less motivated than their nonpsychopathic counterparts, expending less effort and time spent in treatment (e.g., Ogloff, Wong, & Greenwood, 1990). Moreover, unlike individuals with most forms of psychopathology, individuals with elevated scores on measures of psychopathy typically do not report subjective distress that reflects shame or guilt, or recognize their own difficulties, which may decrease their motivation to continue with treatment (Ogloff et al., 1990; Reid & Gacono, 2000).

Clearly, the nature of psychopathy makes psychotherapy difficult. Such obstacles undoubtedly fuel popular opinion that psychopathy is, at its core, untreatable. Nevertheless, potential difficulties in the therapeutic process do not render psychopathy untreatable. Rather, this question rests on the empirical status of treatment investigations. Indeed, despite widespread negative opinions regarding psychopathy's treatability, researchers have attempted to investigate its treatment response. Still, in comparison with other domains of treatment research, there is a striking dearth of scientific literature examining the therapeutic response of individuals with psychopathy. Further, and perhaps more problematic than the small quantity of empirical investigations, there is the large number of methodological issues in this limited literature. As such, the overall scientific quality of this literature is wanting, and informative meta-analyses and narrative reviews are difficult to conduct and interpret. Given the various issues enumerated in the following sections, it is challenging to evaluate the scientific literature on the treatment of psychopathy within extent models of evidentiary support (e.g., David & Montgomery, 2011).

<a>11.3 Methodological Issues in Treatment Investigations

<pf>As noted, few evaluations of the treatment of psychopathy exist. Even more scarce are scientifically sound, controlled examinations of treatments designed specifically to target psychopathy (Lösel, 1998). Although a growing literature supports the effectiveness of treatments designed to reduce future violence in high-risk offenders (e.g., Di Placido, Simon, Witte, Gu, & Wong, 2006; Polaschek, Wilson, Townsend, & Daly, 2005; Wong, Gordon, Gu, Lewis, & Olver, 2012), few studies have explicitly considered psychopathy's responsiveness to treatment. In this section, we review methodological limitations specific to the treatment of psychopathy as well as barriers to progress in this area.

<b>11.3.1 Lack of Contemporary, Empirically Rigorous Studies

<pf>The majority of the existing studies concerning the treatment of psychopathy were conducted prior to the 1980s; yet, as noted previously, the past few decades have seen significant gains regarding our understanding of psychopathy's etiology and assessment. As a result, the field is ripe for an influx of treatment evaluation studies based upon this surge of scientific progress in the field.

In 2002, Salekin conducted a meta-analysis of 42 studies of interventions for psychopathy, yet only six were published after 1980, further highlighting the need for contemporary treatment studies. Salekin (2002) reported that, on average, 62% of patients benefited from various forms of psychotherapy (which included psychoanalytic, cognitive–behavioral, therapeutic community, pharmacotherapeutic, and eclectic approaches) compared with 20% of those in the control groups. Nevertheless, critics have noted that most of the studies

included in Salekin's meta-analysis contained serious methodological flaws: Many studies did not utilize a reliable, valid assessment tool for psychopathy; few assessed criminal behavior, violence, and/or aggression as outcomes; few utilized comparison groups; many had very small sample sizes; and effectiveness was frequently determined based on therapist opinion (Harris & Rice, 2006). Indeed, Salekin addressed such weaknesses by noting, "Though the studies in the current review may be less than optimal in scientific rigor, their inclusion is considered to be both necessary and important given our current state of knowledge on psychopathy" (Salekin, 2002, p. 106).

Given the especially high prevalence rates of psychopathy in prisons (e.g., Hare, 1998), most treatment studies are conducted in forensic settings. Nevertheless, it difficult to recruit equivalent comparison groups in prisons or forensic hospitals and, as such, few controlled treatment-efficacy studies have been conducted on personality-disordered, much less psychopathic, adults in these settings (Lösel, 2001). Rather, many treatment studies involve quasi-experimental designs and nonequivalent control groups (Lösel, 1998) and, as such, are susceptible to selection effects, among other limitations (Cook, Campbell, & Day, 1979). For example, rather than being randomly assigned, offenders might be placed in various treatment groups for a number of nonrandom reasons, including their behavior or staff preference/availability. Whereas controlled research examining treatment of offenders exists (e.g., Lösel, 1995), few controlled studies examine psychopathy specifically. More often, treatment studies involve broad groups of offenders, and psychopathy is not the explicit target of assessment or treatment.

<b>11.3.2 Lack of Theoretically Grounded Treatments

<pf>Among the psychopathy literature, rarely are interventions specifically designed to target psychopathy. In a follow-up to their 2002 meta-analysis, Salekin and colleagues (2010) conducted a review of "second-generation" treatment studies, all of which utilized structured assessments of psychopathy (e.g., the PCL or its variants) in an effort to focus on more scientifically rigorous investigations. None of the eight adult studies reviewed included treatments designed to target psychopathy, and many were marked by other methodological weaknesses, such as the use of small samples or retrospective designs (Salekin et al., 2010). Moreover, the descriptions of the interventions in many investigations were brief and neglected to report important procedural or theoretical details, such as posited theoretical mechanisms of change or explicit treatment goals.

Relatedly, reviewers have repeatedly pointed out the need for more theoretically sound conceptualizations of psychopathy, which could, in turn, lead to the development of corresponding interventions designed based on the etiology of psychopathy (Lösel, 1998; Salekin, 2002; Salekin et al., 2010). Indeed, the development of effective treatment programs will presumably benefit from a better understanding of psychopathy's etiology. Many etiological theories of psychopathy exist, including learning theories focusing on modeling and conditioning (e.g., Bandura, 1973; Patterson, Dishion, & Chamberlain, 1993); social cognitive theories (e.g, Huesmann, 1988); response perseveration (Hare, 1970) and response modulation (e.g., Newman & Kosson, 1986; theories invoking personality dispositions, such as fearlessness or sensation-seeking (e.g., Eysenck, 1977; Lykken, 1995; Quay, 1965;); empathy theories (e.g., Gough, 1948); emotional processing theories (Blair, 2003; Hare, 1998); and environmental theories (e.g., McCord & McCord, 1964). Compared with the large number of theories, a limited number of

theoretically grounded treatments exist. For example, few of the interventions employed in the 42 studies reviewed by Salekin (2002) were informed by an etiological theory of psychopathy.

<b>11.3.3 Lack of Consensus Regarding Conceptualization and Assessment of Psychopathy

<pf>Inconsistencies in conceptual definitions of psychopathy affect both the classification of psychopathy and the assessment of treatment responsiveness. For example, treatment studies based on conceptualizations of psychopathy that place a greater emphasis on behavioral features tend to measure treatment progress based on criminal or antisocial behavior, potentially at the exclusion of other possible treatment gains. Indeed, whereas some argue that recidivism should be the primary outcome of interest (e.g., Harris & Rice, 2006; Wong & Hare, 2005), others argue that treatment studies should consider a wide variety of outcomes (e.g., Salekin, 2002; Salekin et al., 2010).

Similarly, the assessment of psychopathy varies greatly between studies. Whereas some treatment studies classify offenders based on legal definitions of psychopathy (e.g., Blackburn, 1993; Dolan & Coid, 1993), others use a diagnosis of ASPD, and still others rely on assorted measures of psychopathy. For example, some studies utilize the PCL or its variants; others, Cleckley's criteria and ratings; and still others, the Minnesota Multiphasic Personality Inventory (MMPI) Psychopathic Deviate scale, which correlates only weakly with the core interpersonal and affective deficits of psychopathy (Harpur et al., 1989). Even among studies employing the same or comparable measures, a wide variety of cut-offs are used to classify psychopathy. Such variation in methods renders meaningful comparison across studies difficult.

<a>11.4 Evaluation of Psychopathy Treatments

<pf>In an attempt to increase the scientific grounding of the field of psychotherapy, David and Montgomery (2011) proposed a novel framework from which to distinguish scientific interventions from those that may produce improvement but lack theoretical substance. David and Montgomery noted that the American Psychological Association Division 12 criteria for empirically supported therapies do not necessitate research support for the theoretical mechanisms of change underlying interventions. They further observed that this omission opens the door for pseudoscientific interventions lacking in theory, and/or interventions relying solely on nonspecific factors, to be considered empirically supported. Thus, their framework emphasized the importance of examining empirical support for both the treatment package and the scientific theory from which it was drawn.

In light of the aforementioned issues in the psychopathy treatment literature, as noted earlier, it is difficult to apply the framework set forth by David and Montgomery (2011) to evaluate the scientific status of the treatment of psychopathy. Given the methodological weaknesses in this literature, it is difficult to identify empirically well-supported therapies, much less therapies based on theoretically sound or explicit mechanisms of change, as most studies do not provide explicit information regarding the active ingredients among various treatment approaches. Further, the vast majority of these treatment studies have been conducted in forensic settings, where offenders typically receive multiple types of treatment (Lösel et al., 1987), rendering conclusions regarding the effects of any specific treatment difficult. As such, it is difficult to isolate specific mechanisms important for change. In the subsections that follow, we selectively review the literature examining diverse types of treatments, with a particular focus on

cognitive–behavioral, therapeutic community, and psychodynamic approaches, as these are the most prevalent in the treatment literature.

<b>11.4.1 Cognitive–Behavioral Approaches

<pf>Treatments based in cognitive–behavioral theory have repeatedly been recommended for psychopathy (Andrews & Bonta, 2010; Serin & Kirychik, 1994; Wong & Hare, 2005). For example, based on etiological theories of psychopathy and aggression, Serin and Kirychik (1994) suggested that psychopaths are characterized by deficits in cognitive and social processing and that, through learning and rehearsal, they acquire violence and aggression as a dominant response. As a result, the authors developed a cognitive–behavioral treatment plan focusing on impulsivity as well as social and cognitive processing, aimed to reduce violence in psychopathic offenders. Although others have similarly developed treatment models for psychopathy based in cognitive–behavioral theory (e.g., Wong & Hare, 2005), few programs have been implemented based on these recommendations, despite the broad success of cognitive–behavioral programs in treating antisociality (e.g., Andrews & Bonta, 2010; Kazdin, Siegel, & Bass, 1992). Instead, most studies simply employ cognitive–behavioral techniques in treatment, without explicit links to theoretical mechanisms of change or etiological theories of psychopathy. Given this caveat, we use the term "cognitive-behavioral" loosely in this section, as the studies reviewed here draw on a variety of cognitive and behavioral methods. Notably, some studies reviewed in this section were conducted prior to the release of the first major texts on cognitive–behavioral modification (e.g., Kendall & Hollon, 1979; Mahoney, 1974; Meichenbaum, 1977), so the degree to which the techniques are consistent with contemporary cognitive–behavioral approaches is unclear.

Notwithstanding these theoretical limitations, among the limited psychopathy treatment literature, therapies based in cognitive–behavioral theory appear to be more promising than other approaches. In his meta-analytic review, Salekin (2002) found cognitive–behavioral therapies to have a success rate of 62%, followed closely by psychoanalytic therapies (59% success rate), compared with a 20% success rate in control groups. Yet, this statistic was based on only five studies (one of which was a case review study of three patients), which all used various forms of therapy involving cognitive and/or behavioral techniques with the goal of resocializing offenders. The interventions included group treatments focusing on skill acquisition, work programs, and highly structured programs involving authoritarian or directive behavioral control along with the identification and prevention of problematic feelings and behaviors. As such, some have criticized the classification of therapies in this review (e.g., Harris & Rice, 2006) and questioned the extent to which the "cognitive–behavioral" treatment studies employed cognitive–behavioral theory or methods, particularly when the term "cognitive–behavioral" had not yet been developed at the time the research was conducted (e.g., Craft, Stephenson, & Granger, 1964).

Nevertheless, in a follow-up review, Salekin and colleagues (2010) responded to this critique, noting that the treatments in the 2002 meta-analysis were categorized based on the techniques apparently used in the therapies. Based on reviews of treatment for antisocial behaviors, others have similarly suggested that cognitive–behavioral approaches may be most promising for antisocial, and specifically psychopathic, individuals (e.g., Lösel, 1998). Nevertheless, a closer inspection of treatment studies employing cognitive, behavioral, or cognitive–behavioral methods reveals a more complicated picture, from which it is difficult to draw definitive conclusions regarding effectiveness.

In terms of reductions in antisocial behaviors, cognitive–behavioral programs have demonstrated some success in individuals high in psychopathic traits. For example, Craft et al. (1964) compared the effectiveness of two treatment regimens in delinquents between the ages of 13 and 25 who were considered psychopathic based on scores on the MMPI Psychopathic Deviate scale. The "self-governing" regime encouraged permissiveness and independence, whereby "students" met with a small psychotherapy group three times per week and were encouraged to take ownership in the unit. In contrast, the "authoritarian" unit consisted of a much more strict and paternalistic regime with a directive atmosphere. At a follow-up at 14 months, youth from the authoritarian regime were faring better than those from the self-governing regime, exhibiting significantly fewer offenses after release and lower reinstitutionalization rates, as well as significant improvements in "clinical state" based on therapist interviews. Based on these results, and using similar treatment methods, Craft (1968) compared the effectiveness of authoritarian versus permissive treatment programs designed to treat psychopathy in several inpatient settings and found the authoritarian treatment to fare somewhat better based on reconviction rates and social adjustment (i.e., ability to hold a job, social wellbeing) posttreatment. Although in both studies the "authoritarian" treatment involved directive therapy and skills-building, it is unclear to what degree these interventions encompassed cognitive–behavioral techniques. Indeed, as mentioned earlier, Harris and Rice (2006) criticized Salekin's (2002) classification of Craft et al.'s (1964) authoritarian treatment as cognitive–behavioral. Moreover, neither study included a no-treatment control group, without which we can conclude only that the authoritarian treatment was related to better outcomes compared to the self-governing treatment. Without a no-treatment control group comparison, it is possible that the self-governing treatment was related to poorer outcomes, resulting in the authoritarian treatment appearing successful. These limitations notwithstanding, the above-reviewed investigations by Craft and colleagues are among the few to implement treatment designed to target psychopathic personality.

More recent research, conducted after the development of cognitive–behavioral therapy, has also provided some support for such techniques. In a small sample of nine psychiatric inpatient offenders classified as psychopathic based on the PCL-R, Hughes, Hogue, Hollin, and Champion (1997) employed a cognitive skill-based treatment designed to broadly increase adjustment. Notably, individuals scoring higher than 30 on the PCL-R were not admitted to the hospital. The authors supported this decision by citing research (Ogloff et al., 1990; Rice, Harris, & Cormier, 1992) that initially appeared to suggest that individuals with higher PCL-R scores may not benefit from treatment. The treatment involved a supportive ward; group work designed to address cognitive, emotional, and skill functioning; and additional support and treatment based on individual needs. The authors examined a broad range of outcomes through the use of 31 measures combined into a single global change score, noting that assessment of global change over time would be more informative than evaluating change on each measure, as the treatment included a small number of patients who participated in a range of different treatments. Further, some of the measures were not standardized for the type of patient in the sample, obscuring any interpretation of magnitude, rather than simply direction, of change. The global change score, which can perhaps be criticized for its heterogeneity, included the assessment of problem-solving skills, attitudes, and impulsivity. Results indicated significant clinical gains in the global change measure; yet PCL psychopathy, and specifically Factor 1, was negatively associated with global change. Overall, although the treatment appears to have been broadly successful, higher psychopathy was associated with fewer treatment gains, implying individuals with marked

psychopathic traits were less responsive to treatment. Combined with the elimination of individuals scoring greater than 30 on the PCL-R, these limitations preclude any conclusions regarding the effectiveness of this treatment among more severe cases. Further, the individuals in this small sample received varied treatment, as treatment was largely based on individual needs. Such differences in treatment, taken together with the use of a global change score, make it difficult to identify the relative contributions of therapeutic elements important for clinical change.

Promising results have also been reported in studies employing cognitive–behavioral methods among adolescents with psychopathic traits. Specifically, in a series of studies, Caldwell and colleagues (Caldwell, McCormick, Umstead, & Van Rybroek, 2007; Caldwell, Skeem, Salekin, & Van Rybroek, 2006; Caldwell, Vitacco, & Van Rybroek, 2006) examined the efficacy of a juvenile treatment center program designed to treat aggressive delinquent boys. The program, based on concepts of social control theory (Gottfredson & Hirschi, 1990; Sampson & Laub, 1997) and Sherman's (1993) theory of defiance, aimed to channel delinquent associations and activities through the development of interpersonal processes, skill acquisition, and social bonds. The treatment involved individual and group treatment, focusing on anger management, social skills, problem-solving, substance abuse, and sex offender treatment. Although the intervention was not specifically designed to treat psychopathy, participants were scored on the PCL: YV (Forth et al., 2003) based on an admission interview and file review. The studies by Caldwell and colleagues revealed that treatment was associated with improved behavior while participants were institutionalized as well as a significant reduction in violent recidivism postrelease. This relatively methodologically rigorous research is an important step forward, as it provides some grounds for optimism regarding psychopathy's amenability to treatment. Still, Caldwell and colleagues were unable to use a randomized treatment design, and treatment was not manualized. Further, the effects of the treatment on attitudes and personality traits associated with psychopathy are unknown.

Cognitive–behavioral programs may be preferable for use with individuals with psychopathic traits, even if the treatment target is not psychopathy or recidivism. For example, in an evaluation of coping skills versus interactional treatment in alcoholics, Kadden, Cooney, Getter, and Litt (1989) found that patients with higher pretreatment sociopathy scores exhibited decreased drinking rates after coping skills training, whereas interactional therapy was more effective for those with lower sociopathy scores. Conceptually related to psychopathy, sociopathy was assessed via the California Psychological Inventory Socialization Scale (Megargee, 1972). Nevertheless, this scale does not assess many of the core affective and interpersonal features of psychopathy and is instead more of an index of generalized antisocial behavior (Harpur et al., 1989). The coping skills program, modeled after cognitive–behavioral treatment programs, involved a highly structured skills training group that focused on skills for dealing with negative moods and drinking desires, as well as interpersonal, relaxation, and problem-solving skills. Group sessions involved didactic presentations by the therapists as well as behavioral rehearsal and homework exercises designed to practice skills learned in group (Monti, Abrams, Kadden, & Cooney, 1989). Although the treatment was designed to target alcoholism, not psychopathy, the results provide some support for the success of cognitive–behavioral treatments among individuals with psychopathic traits.

Cognitive–behavioral approaches have also evidenced some success with regard to risk reduction in criminal samples with high levels of psychopathic traits. For example, Olver, Lewis, and Wong (2013) examined the effectiveness of a cognitive–behavioral treatment program

among a sample of violent adult offenders in a psychiatric facility. The treatment, termed "ABC Program," is a 6- to 8-month high-intensity violence reduction program based in social learning principles. Founded upon the "what works" principles of correctional treatment (Andrews & Bonta, 2010), the program focuses on targeting on and intervening in criminogenic needs that are linked to violence (such as antisocial attitudes, anger problems, and relationship skills deficits) and promoting the acquisition of prosocial skills to reduce engagement in violent behaviors. Thus, although the program was not designed to target psychopathic traits per se, the intervention targets are related to psychopathy. Moreover, psychopathy as assessed by the PCL-R was examined in relation to therapeutic change and violent recidivism. Therapeutic change scores were negatively correlated with PCL-R dimensions, such that Factor 1 (encompassing the interpersonal and affective features of psychopathy) was a better predictor of decreased therapeutic change than Factor 2 (encompassing the antisocial features of psychopathy). Nevertheless, the authors observed reductions in violent recidivism, although the association between treatment change and violence was weaker after controlling for callous–unemotional features of psychopathy (Olver et al., 2013). Thus, the interpersonal features of psychopathy may render engagement in treatment difficult and thus stand in the way of treatment gains. It is important to note, however, that no control or comparison sample was involved in this study, thus weakening any conclusions with regard to treatment effectiveness. Nevertheless, this investigation lends promising support to the possibility that cognitive–behavioral approaches may exhibit some effectiveness with regard to risk reduction in psychopathic samples (for a review see Wong & Olver, 2015), although it is important for future research to consider the use of a nontreatment control group for comparison purposes.

Still, not all investigations of cognitive–behavioral approaches to psychopathy have yielded promising outcomes. In fact, some have suggested that certain treatments may be iatrogenic, particularly for individuals with high levels of the interpersonal and affective features of psychopathy. Specifically, Hare, Clark, Grann, and Thornton (2000) conducted a nonrandomized controlled study of 278 male offenders in several English prisons. All participants were scored on the PCL-R as part of the admissions process. Offenders participated in a short-term anger management program involving social skills training. After a 2-year follow-up, individuals with higher Factor 1 scores exhibited significantly higher rates of reconviction. The authors speculated that Factor 1 psychopaths may have increased their manipulative skill while in treatment. Nevertheless, without a control or comparison condition, it is impossible to know whether the treatment was causally associated with poor outcome. Moreover, the description of the treatment in this study is lacking, and it is possible that it varied across settings (Salekin et al., 2010). Furthermore, the authors noted that nonpsychopathic offenders did not benefit from the treatment, calling into question the appropriateness of the intervention (Hare et al., 2000). As such, it is difficult to conclude that this study provides evidence against the treatability of psychopathy.

Similarly, Seto and Barbaree (1999) suggested that sex offenders with psychopathic traits are adept at manipulating others during and after treatment. Specifically, Seto and Barbaree (1999) examined PCL-R psychopathy, treatment behavior, and recidivism rates among a sample of sex offenders in a cognitive–behavioral and relapse prevention program. The treatment involved daily 3-hour group sessions over a period of 5 months. The treatment focused on the identification and understanding of individual offense cycles by sequencing the thoughts, feelings, and behaviors preceding the commission of a sexual offense. Then, an individualized relapse prevention plan was enacted for each offender, which focused on the development of

coping skills and/or avoidance strategies in accordance with individual triggers. Notably, the treatment was not designed to target psychopathy per se. Results revealed that offenders with higher PCL-R scores, who were rated to have behaved more positively in treatment, actually exhibited higher violent and/or sex offense recidivism rates. Nevertheless, these results did not hold up in a follow-up study (Barbaree, 2005), and others have questioned the meaning of the treatment behavior ratings in the Seto and Barbaree (1999) study. For example, Polaschek and Daly (2013) pointed out that the treatment behavior ratings in the original study, which were created by research assistants through the retrospective examination and aggregation of information from posttreatment reports, could not be replicated through the same process by two independent raters in a follow-up study (Langton, Barbaree, Harkins, & Peacock, 2006). Additionally, it was suggested that the treatment behavior ratings in Seto and Barbaree (1999) may have been biased by information unrelated to the treatment (Langton et al., 2006). Moreover, Olver and Wong (2009) examined the efficacy of a similar cognitive–behavioral relapse prevention program among psychopathic sex offenders and reported much more positive results. Although psychopathy was a predictor of treatment dropout, 73% of psychopathic offenders completed the program, and those who dropped out exhibited higher rates of violent, but not sexual, recidivism. Furthermore, positive treatment gains (as assessed by a violence risk scale) were associated with lower recidivism rates, indicating that individuals who were rated to have benefited more from treatment did not recidivate, although this finding may also merely reflect the fact that better adjusted participants were at lower risk for recidivism, independent of treatment. In light of these findings, it is difficult to conclude that treating psychopathy exacerbates psychopathic traits or creates a "more skilled" psychopath.

The aforementioned literature reveals that, whereas some investigations of cognitive–behavioral techniques for the treatment of psychopathy report some success, a closer inspection of these investigations reveals methodological limitations that preclude clear-cut conclusions. Moreover, cognitive–behavioral techniques may be more successful than other approaches among individuals with psychopathic traits, even if psychopathy is not the target of treatment.

<b>11.4.2 Therapeutic Communities

<pf>The concept of the therapeutic community is one of the most frequently employed interventions for psychopathy. It was initially developed by Jones (1952) as a potential treatment for psychopathic inmates, on the basis that rehabilitation may occur if inmates are provided with an encouraging environment that fosters the adoption of responsibility for one's actions. Some authors (e.g., Hare, 1970) have also suggested that the therapeutic community creates a reshaped social environment capable of changing psychopathic personality traits and behaviors. Nevertheless, the theoretical mechanisms within the therapeutic community that would bring about change in psychopathic personality traits are unclear.

After the therapeutic community first appeared, several modifications were instituted and numerous versions implemented. Certain components are relatively consistent among the various implementations. Specifically, therapeutic communities are distinctive in their establishment of an informal, supportive atmosphere in otherwise traditional institutions. For example, inmates are responsible for directing everyday activities, and facility staff serve as models for prosocial behavior and confront disruptive behaviors. Further, the residential community within the institution provides a supportive, therapeutic atmosphere. A critical component of the therapeutic community is the daily group meeting, at which all patients and staff are present. This meeting provides a cooperative, democratically based decision-making setting in which therapy can take

place, potential conflicts can be discussed, and rules can be developed. Nevertheless, the therapeutic communities employed in the literature are not systematic treatments, and variety is commonplace. Moreover, many studies provide relatively brief descriptions of the therapeutic community, and some approaches are questionable in light of current ethical standards; for example, the inclusion of harsh disciplinary actions for misbehavior (e.g., seclusion) or the administration of alcohol and drugs (e.g., Rice, Harris, & Cormier, 1992). Not surprisingly, such approaches have attracted significant controversy and criticism (e.g., Polaschek & Daly, 2013; Skeem, Polaschek, & Manchak, 2009).

Although the therapeutic community is one of the most frequently used interventions for psychopathy, it has received little empirical support. In his 2002 meta-analysis, Salekin concluded that therapeutic communities were among the least effective treatments for psychopathy. Based on eight studies, Salekin (2002) found therapeutic communities to be associated with an average success rate of 25%, only slightly higher than that of the control conditions (20%). Although early studies using therapeutic communities boasted some success (e.g., Barker, Mason, & Wilson, 1968; Copas, O'Brien, Roberts, & Whiteley, 1984; Copas & Whiteley, 1976; Kiger, 1967), they were replete with methodological limitations, such as not classifying individuals as psychopathic or nonpsychopathic, not including a nontreatment control group, or not describing the treatment in sufficient detail.

Studies involving more rigorous scientific designs also do not provide much support for the effectiveness of the therapeutic community for psychopathic individuals. For example, Ogloff et al. (1990) examined a therapeutic community program in a forensic hospital. The authors split participants into subgroups based on PCL scores (those with a score of 27 or greater were classified as "psychopathic"; those who scored between 18 and 26 as "mixed"; and those who scored 17 or below as "nonpsychopathic") and found that psychopathic individuals exhibited less motivation in treatment and dropped out sooner than those in the other two groups, and also evidenced less clinical improvement at discharge (based on independent raters' reviews of clinical discharge summaries). These results are consistent with those from other therapeutic communities, which find psychopathy scores to be associated with poorer attendance and adherence to treatment (e.g, Hobson, Shine, & Roberts, 2000; Richards, Casey, & Lucente, 2003). The therapeutic community may not be sufficiently engaging or motivating to be successful for individuals with psychopathy. However, as Salekin and colleagues (2010) pointed out, this study employed a retrospective design and only followed up a small portion of the participants (n = 28).

Although controversial, similarly to the findings regarding cognitive–behavioral programs with sex offenders (e.g., Seto & Barbaree, 1999), some research indicates that treatment of psychopathy using the therapeutic community may make psychopaths "worse" (Rice et al., 1992). One of the best-known examinations of the therapeutic community's effectiveness in reducing violence was conducted by Rice, Harris, and Cormier (1992). The authors retrospectively evaluated the 1960s Oak Ridge Social Therapy Unit, a hospitalization program in which 146 treated offenders were matched with an equal number of untreated offenders (based on age, criminal history, and index offense). All participants were scored on the PCL-R based on file information. Based on follow-up data roughly 10.5 years posttreatment, the authors concluded that the hospital treatment program resulted in increased risk of violent recidivism for psychopaths but decreased risk for nonpsychopaths. The authors speculated that the treatment provided a learning opportunity for both psychopaths and nonpsychopaths alike.

Whereas the nonpsychopaths used the information to behave prosocially, the psychopaths used it to manipulate and exploit others (Harris & Rice, 2006; Rice et al., 1992).

Yet, several commentators have seriously questioned numerous elements of the treatment program, particularly its coerciveness, and highlighted the possibility that psychopaths were differentially harmed in the involuntary program, as they were exposed to more radical disciplinary action than were nonpsychopaths (e.g, Polaschek & Daly, 2013; Skeem et al., 2009). Specifically, in service of disrupting patients' unconscious defenses, treatment was intensive and included extreme measures, such as the administration of drugs (methedrine, LSD, scopolamine, and alcohol) and the use of marathon nude encounter sessions lasting up to 2 weeks. Despite the dubious treatment methods used in this study, it has repeatedly been cited as evidence that therapy makes psychopaths worse (e.g., Hare, 1993). Needless to say, this conclusion can be questioned.

Overall, the early optimism regarding the effectiveness of the therapeutic community in treating psychopathy appears to have dissolved. The treatment mechanism involved in therapeutic communities that would theoretically bring about change in psychopathic personality is unclear. Moreover, studies examining the effectiveness of therapeutic communities in reducing violence and antisocial behaviors have employed questionable and at best controversial techniques (e.g., Rice et al., 1992), raising questions about the evidentiary basis of this approach.

<b>11.4.3 Psychodynamic Approaches

<pf>Given that psychoanalytic theory traditionally regards the development of a positive transference relationship between the therapist and client as an essential vehicle for improvement, it would seem unlikely that psychoanalytic approaches would be especially successful in the treatment of psychopaths, who have difficulty forming attachments with others. Yet, in his 2002 meta-analysis, Salekin found psychoanalytic therapies to be second only to cognitive–behavioral approaches in the effective treatment of psychopathy. He reported a success rate of 52% among 17 studies employing psychoanalytic methods. Nevertheless, a closer examination reveals a murky picture. First, only one of the studies classified by Salekin to be psychoanalytic involved a controlled design; the remaining 16 were case studies or collections of case studies. Thus, many of these studies lack scientific rigor and involved unsystematically administered treatments whose posited mechanisms of change were often not explicitly described by the authors. Moreover, most studies omitted crucial details concerning the treatment methods used. Such issues preclude firm conclusions regarding the effectiveness of psychoanalytic approaches in the treatment of psychopathy.

In one of the few scientifically designed studies, Heaver (1943) examined the effects of psychoanalytic treatment among 40 hospitalized male patients. The patients were diagnosed with psychopathy based on Cheney's (1934) criteria: emotional immaturity or childishness, marked defects of judgment, inability to learn by experience, impulsive reactions without consideration for the feelings of others, and emotional instability characterized by rapid swings from elation to depression. Notably, these criteria could have captured individuals with conditions other than psychopathy, such as borderline personality disorder. Moreover, both the treatment and outcome measures were minimally, if at all, described. The results revealed 40% of the patients conformed to society's standards posttreatment, upon which the authors concluded that the treatment was effective. Nevertheless, the study included no comparison group, and, as mentioned, important information regarding treatment and outcome measures was omitted. As such, no conclusions can be drawn regarding the effectiveness of the treatment.

Several other treatments related to psychoanalytic theory have also been attempted with psychopathic individuals. Rooted in part in psychoanalytic theory, "psychodrama" relies heavily on the use of role-playing as a process by which the individual can be exposed to a greater variety of feelings and attitudes. Although the empirical support for this contention is questionable, some have suggested that such role-playing techniques provide a unique opportunity for psychopaths to break through their presumed defenses to alter their emotional experience, and potentially develop empathy (Carpenter & Sandberg, 1973). Psychodrama is often referred to as an "action" method and is closely related to action-oriented programs, which focus on decreasing boredom to increase treatment engagement. Action-oriented programs first appeared in the 1960s, in response to reports of little to no success in treating the most hard-core, psychopathic offenders within penal institutions. As a result of these repeated poor treatment outcomes, clinicians called for novel approaches. For example, Fox (1961) stated that "Because he is so difficult to reach, the usual and accepted methods of therapy are just not effective. Something unusual, unorthodox, and unexpected is needed to begin this relationship (pg. 476)." Thus, based on theories that emphasized the psychopath's tendency to seek increased variety in environmental stimuli (e.g., Quay, 1965), treatment programs were developed that highlighted change, action, and novelty. The developers believed that such environments might engage psychopaths to such an extent that they could be effectively managed within institutions, and consequently benefit from regular programming (Ingram, Gerard, Quay, & Levinson, 1970).

Although the first report on psychodrama for psychopathy was promising (Corsini, 1958), it was a single case study. Numerous studies have examined psychodrama in correctional settings, yet few have examined the effectiveness of psychodrama in individuals with psychopathic traits using comparison groups. One such study was conducted by Maas (1966), who investigated the effectiveness of psychodrama in 46 adult female offenders, all of whom were classified as sociopathic based on Gough's (1960) Socialization scale, which is a suboptimal measure of psychopathy. The experimental group received a combination of psychodrama and more traditional group therapy, whereas the control group received no treatment. The Ego Identity Index (Block, 1961), which is based on the extent of interpersonal consistency in interactions with others, was administered pre- and posttreatment as an index of the individual's level of "ego diffusion." Although no outcome data were provided, a significant difference between groups revealed that the experimental group exhibited a stronger sense of personal identity. Given the lack of actual data provided, however, few firm conclusions can be drawn from this study.

To our knowledge, the study conducted by Ingram and colleagues (1970) is the only one to examine the efficacy of action-oriented therapy with psychopathic offenders. The authors compared 20 juvenile delinquents in action-oriented therapy, which included psychodrama, with 41 youth who received standard institutional counseling. The treatment, aimed at reducing boredom in psychopathic youth, emphasized excitement and novelty through various recreational activities and a "circus-like" atmosphere. Youth were rewarded with points and prizes for positive behavior and for winning competitions. Results indicated that youth in the action-oriented program spent significantly fewer days in administrative segregation, committed fewer violent offenses in the institution, and exhibited less negative institutional adjustment after transfer to another institution (defined as fewer instances of being absent without leave and fewer disciplinary transfers) than did youth in standard institutional counseling. Overall, the results suggest that psychopathic youth may be more engaged with treatments involving varied, exciting experiences, resulting in more positive institutional behavior. Yet, without long-term outcome

data, the stability of these treatment gains over time and the extent to which the gains are maintained across settings (e.g., in the community, postrelease) are unknown.

In sum, psychoanalytic approaches to the treatment of psychopathy have received little support. Yet, because psychodynamic treatments are meant to directly effect personality change, it is theoretically reasonable to consider psychodynamic treatments for psychopathy, especially when conceptualizing psychopathy within a personality framework. Nevertheless, especially in view of psychopaths' presumed inability to form close attachments to others, including therapists, the theoretical basis for psychoanalytic techniques (which require the development of a transference relationship with the therapist) for psychopathy is scientifically questionable, rendering the proposed mechanisms of change in turn questionable. Further, the scientific rigor in the psychoanalytic treatment literature for psychopathy is wanting, and, as such, precludes clear-cut conclusions regarding the effectiveness of psychoanalytic approaches.

<a>11.5 Implications for Research

<pf>Overall, the preceding review reveals that, although various attempts have been made to identify successful treatments for psychopathy, this goal has not yet been attained. This conclusion does not necessarily render psychopathy untreatable, although it suggests that successful treatments have yet to be discovered through rigorous scientific investigations. Indeed, it is possible that a successful treatment has already been developed but that the methodological difficulties pervading much of the aforementioned literature render conclusions regarding its efficacy premature. Alternatively, it may be that a successful treatment has yet to be developed and its efficacy demonstrated (Harris & Rice, 2006). In either case, the burden of proof lies on investigators to demonstrate such efficacy for any specific psychopathy treatment. In our view, this burden has yet to be convincingly dealt with.

In spite of psychopathy's poor reputation with regard to treatability, researchers are pursuing new and creative treatment options as our understanding of brain–behavior relationships continues to grow and evolve. Specifically, neuroscience research increasingly points to various structural and functional deficits associated with psychopathy, such as decreased amygdala volume (e.g., Boccardi et al., 2011; Ermer, Cope, Nyalakanti, Calhoun, & Kiehl, 2012; Yang, Raine, Narr, Colletti, & Toga, 2009) and activation (e.g, Birbaumer et al., 2005; Rilling et al., 2007) and abnormalities in the prefrontal cortex (e.g., Gregory et al., 2012; Yang & Raine, 2009). Some researchers are hopeful that these advances in brain research on psychopathy may be able to inform intervention efforts in the future (e.g., Mobbs, Lau, Jones, & Frith, 2007), suggesting that the affected brain regions in people with psychopathy may serve as effective mechanisms of change, such that we may be able to modify their structural and/or functional deficits through various modes of noninvasive treatment, including repetitive transcranial magnetic stimulation (Glenn & Raine, 2013. Drawing on advances in neurobiology and cognitive neuroscience, cognitive remediation has also been suggested as a potential avenue for intervention (Baskin-Sommers, Curtain, & Newman, 2015). This treatment, still in the initial stages of development, uses cognitive training techniques to target attentional biases in psychopathic individuals who fail to recognize important affective, inhibitory, and punishment cues that interact with goal-directed behaviors. The stated goal of this approach would be to support individuals' amelioration of attentional biases and modification of reactionary behaviors. Nevertheless, these are theoretical treatments at this point, which have yet to enter the infancy stage of rigorous scientific testing that will be needed before any conclusions can be reached as to their effectiveness.

To scientifically evaluate various treatments using evaluative frameworks such as that proposed by David and Montgomery (2011), treatments that target theoretically sound mechanisms of change must first be developed. Indeed, therapies that are more closely tied to well-articulated etiological theories have the greatest chance of moving research in this area forward (Salekin, 2002; Salekin et al., 2010). As such, we must develop treatments that are (1) explicitly designed to target psychopathy and allied conditions and (2) are consistent with scientifically supported theories of the construct. One obstacle to this end is the lack of consensus regarding psychopathy's definition and essential features, an issue that has been repeatedly highlighted by researchers in the past (Blackburn, 1993; Harris & Rice, 2006; Lösel, 1998; Salekin, 2002; Salekin et al., 2010). Such disagreement leads to variability in the assessment of psychopathy as well as treatment targets, and hinders the emergence of consistent patterns of success or failure across studies. With so many theoretical models of psychopathy in existence, future research should consider how differing conceptualizations and operationalizations of psychopathy relate to measured treatment response (Salekin et al., 2010). Moreover, consensus must also be reached regarding the definition of efficacy in relation to psychopathy treatment. At the very least, the goals of therapy and the outcomes of interest must be tied more explicitly to psychopathy's core personality traits as opposed exclusively to its associated antisocial and criminal behaviors. Although recidivism is a theoretically and pragmatically important outcome of interest (Harris & Rice, 2006), it may be fruitful to consider broad outcomes related to psychopathy and life functioning, such as job performance, interpersonal relationships, and engagement in enjoyable activities (Salekin et al., 2010).

In addition to enhancing the theoretical grounding of treatments, the scientific rigor of treatment investigations must be improved (Lösel, 1998; Salekin, 2002; Salekin et al., 2010). Since the mid-1990s, significant strides have been made in the development of reliable and valid measures of psychopathy. It will be important to rely more heavily on these established measures for baseline and outcome assessments in future treatment investigations. Studies involving nontreatment control groups will also be important. Moreover, studies should include detailed methodological information, particularly details specific to the treatment package and its posited theoretical mechanisms of change, to facilitate replication studies. In sum, prospective, controlled studies of psychopathy's treatment response are needed to evaluate the effectiveness of specific therapeutic packages. Such investigations are also necessary to advance conclusions regarding the evidentiary basis of the treatment of psychopathy.

<a>11.6 Implications for Clinical Practice

<pf>Overall, the above-reviewed literature reveals little empirical support for various treatment approaches for psychopathy. Yet, it is important to emphasize the distinction between *invalidated* therapies, which have been systematically examined and shown to be ineffective, and *unvalidated* therapies, which have not been adequately systematically examined to draw conclusions (Arkowitz & Lilienfeld, 2006). Although treatment for psychopathy has received little evidentiary support thus far, methodological limitations in the existing literature prevent the conclusion that the available treatments are *invalidated*. Rather, the available treatments can only be considered *unvalidated*, further underscoring the need for more rigorous scientific investigations.

In the absence of a strong evidentiary basis for any specific psychopathy treatments, clinical intervention must rely on the best available evidence. As such evidence is lacking for psychopathy specifically, a first step may be to turn to supported treatments for antisocial

behavior. Indeed, in forensic settings, where a higher percentage of psychopathic personalities exist, behavior control may be the most important target of treatment. Interventions based in social learning theories have exhibited success in offender groups (Andrews & Bonta, 2010) and, as such, may be appropriate for individuals with psychopathy (Lösel, 1998). Yet, solely targeting antisocial behavior without consideration for the etiology of psychopathy may impede the success of treatment. Research examining the treatment of antisocial behaviors reveals that the programs evidencing the most success are those based on scientifically sound hypotheses regarding the development and maintenance of such behaviors (Andrews & Bonta, 2010; Antonowicz & Ross, 1994). As such, interventions are more likely to be successful if underlying processes are considered (Beauchaine, Neuhaus, Brenner, & Gatzke-Kopp, 2008). Indeed, cognitive–behavioral interventions designed to target personality traits that have been identified as risk factors for youth substance misuse have evidenced promising and long-lasting effects on youth behavior postintervention (e.g., Conrod, Castellanos, & Mackie, 2008; Conrod, Stewart, Comeau, & Maclean, 2006; Conrod et al., 2000; Watt, Stewart, Birch, & Bernier, 2006). When conceptualizing psychopathy from a personality perspective, such interventions appear particularly promising, given the focus on personality traits as risk factors for the development and expression of psychopathy.

<a>11.7 Conclusions

<pf>In conclusion, although there is promising evidence that psychopathy may be somewhat treatable, the evidentiary support for any given treatment is minimal. Most interventions are not specifically designed to target psychopathy according to accepted theoretical models of the construct, and there is no shortage of methodological weaknesses in the psychopathy treatment literature. As such, most interventions are lacking theoretical and empirical basis and are not amenable to evaluative frameworks for empirical support (e.g., David & Montgomery, 2011).

Although popular opinion has generally regarded psychopathy as untreatable, the lack of evidentiary basis for specific interventions does not support this conclusion. Indeed, over 50 years ago, Chwast (1961) highlighted this sentiment in his review of problems in the treatment of psychopathic offenders with the following statement: “An interesting question does arise, however, in clarifying to what extent a prognosis of irreversibility reflects an admission of our own therapeutic incompetency and inadequacy rather than an asseveration that change is not possible in any environment under any set of circumstances” (p. 223). Rather, the psychopathy treatment literature demonstrates that successful treatment has yet to be demonstrated, underscoring the need for more research in this arena. In light of several sanguine reviews (Salekin, 2002; Salekin et al., 2010) and promising indications of effective treatments (e.g., Caldwell et al., 2007; Caldwell, Skeem et al., 2006; Caldwell, Vitacco, & Van Rybroek, 2006; Skeem, Monahan, & Mulvey, 2002), attitudes regarding psychopathy’s amenability to treatment appear to be softening. Indeed, with major strides in research on the etiology and assessment of psychopathy occurring over the past few decades, we are now in a much better position to develop and evaluate theoretically grounded, evidence-based psychopathy treatments.

<rh>References

American Psychiatric Association. (1952). *Diagnostic and statistical manual of mental disorders* (1st ed.). Washington, DC: American Psychiatric Association.

American Psychiatric Association. (1968). *Diagnostic and statistical manual of mental disorders* (2nd ed.). Washington, DC: American Psychiatric Association.

American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: American Psychiatric Association.
American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd rev. ed.). Washington, DC: American Psychiatric Association.
American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.
American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: American Psychiatric Association.
Anderson, J. L., Sellbom, M., Wygant, D. B., Salekin, R. T., & Krueger, R. F. (2014). Examining the associations between DSM-5 Section III antisocial personality disorder traits and psychopathy in community and university samples. *Journal of Personality Disorders*, *28*, 675–697. doi:10.1521/pedi_2014_28_134
Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct* (5th ed.). Cincinnati, OH: Anderson.
Antonowicz, D. H., & Ross, R. R. (1994). Essential components of successful rehabilitation programs for offenders. *International Journal of Offender Therapy and Comparative Criminology*, *38*(2), 97–104. doi:10.1177/0306624x9403800202
Arkowitz, H., & Lilienfeld, S. O. (2006). Psychotherapy on trial. *Scientific American Mind*, *17*(2), 42–49. doi:10.1038/scientificamericanmind0406-42
Bandura, A. (1973). Social learning analysis of aggression. In E. Ribes-Inesta & A. Bandura (Eds.), *Analysis of delinquency and aggression.* Oxford, UK: Lawrence Erlbaum Associates.
Barbaree, H. E. (2005). Psychopathy, treatment behavior, and recidivism: An extended follow-up of Seto and Barbaree. *Journal of Interpersonal Violence*, *20*(9), 1115–1131. doi:10.1177/0886260505278262
Barker, E. T., Mason, M. H., & Wilson, J. (1969). Defence-disrupting therapy. *Canadian Psychiatric Association Journal*, *14*, 355–359. doi:10.1177/070674376901400407
Baskin-Sommers, A. R., Curtin, J. J., & Newman, J. P. (2015). Altering the cognitive-affective dysfunctions of psychopathic and externalizing offender subtypes with cognitive remediation. *Clinical Psychological Science, 3(1),* 45-57. doi: 10.1177/2167702614560744
Beauchaine, T. P., Neuhaus, E., Brenner, S. L., & Gatzke-Kopp, L. (2008). Ten good reasons to consider biological processes in prevention and intervention research. *Development and Psychopathology*, *20*(3), 745–774.
Birbaumer, N., Veit, R., Lotze, M., Erb, M., Hermann, C., Grodd, W., & Flor, H. (2005). Deficient fear conditioning in psychopathy: A functional magnetic resonance imaging study. *Archives of General Psychiatry*, *62*(7), 799–805. doi:10.1001/archpsyc.62.7.799
Blackburn, R. (1993). *The psychology of criminal conduct: Theory, research and practice*. Chichester, UK: John Wiley & Sons.
Blair, R. J. R. (2003). Neurobiological basis of psychopathy. *British Journal of Psychiatry*, *182*(1), 5–7. doi:10.1192/bjp.182.1.5
Block, J. (1961). Ego identity, role variability, and adjustment. *Journal of Consulting Psychology*, *25*(5), 392–397. doi:10.1037/h0042979
Boccardi, M., Frisoni, G. B., Hare, R. D., Cavedo, E., Najt, P., Pievani, M., … Tiihonen, J. (2011). Cortex and amygdala morphology in psychopathy. *Psychiatry Research: Neuroimaging*, *193*(2), 85–92.

Caldwell, M., Skeem, J., Salekin, R., & Van Rybroek, G. (2006). Treatment response of adolescent offenders with psychopathy features: A 2-year follow-up. *Criminal Justice and Behavior*, *33*(5), 571–596. doi:10.1177/0093854806288176

Caldwell, M. F., McCormick, D. J., Umstead, D., & Van Rybroek, G. J. (2007). Evidence of treatment progress and therapeutic outcomes among adolescents with psychopathic features. *Criminal Justice and Behavior*, *34*(5), 573–587.

Caldwell, M. F., Vitacco, M., & Van Rybroek, G. J. (2006). Are violent delinquents worth treating? A cost–benefit analysis. *Journal of Research in Crime & Delinquency*, *43*(2), 148–168. doi:10.1177/0022427805280053

Carpenter, P., & Sandberg, S. (1973). "The things inside": Psychodrama with delinquent adolescents. *Psychotherapy: Theory, Research & Practice*, *10*(3), 245–247. doi:10.1037/h0087586

Cheney, C. O. (1934). *Outlines for psychiatric examinations*. New York, NY: New York State Department of Mental Hygiene.

Chwast, J. (1961). Reversibility–irreversibility: Problems in the treatment of offenders. *American Journal of Psychotherapy*, *15*, 221–232.

Cleckley, H. (1941/1988). *The mask of sanity*. St. Louis, MO: Mosby.

Cloninger, C. R. (1978). The antisocial personality. *Hospital Practice*, *13*, 97–106. doi:10.1080/21548331.1978.11707387

Coid, J., Yang, M., Ullrich, S., Roberts, A., Moran, P., Bebbington, P., … Hare, R. (2009). Psychopathy among prisoners in England and Wales. *International Journal of Law and Psychiatry*, *32*(3), 134–141. doi:10.1016/j.ijlp.2009.02.008

Conrod, P. J., Castellanos, N., & Mackie, C. (2008). Personality-targeted interventions delay the growth of adolescent drinking and binge drinking. *Journal of Child Psychology and Psychiatry*, *49*(2), 181–190.

Conrod, P. J., Stewart, S. H., Comeau, N., & Maclean, A. M. (2006). Efficacy of cognitive–behavioral interventions targeting personality risk factors for youth alcohol misuse. *Journal of Clinical Child & Adolescent Psychology*, *35*(4), 550–563. doi:10.1207/s15374424jccp3504_6

Conrod, P. J., Stewart, S. H., Pihl, R. O., Côté, S., Fontaine, V., & Dongier, M. (2000). Efficacy of brief coping skills interventions that match different personality profiles of female substance abusers. *Psychology of Addictive Behaviors*, *14*(3), 231–242. doi:10.1037//0893-164x.14.3.231

Cook, T. D., Campbell, D. T., & Day, A. (1979). *Quasi-experimentation: Design & analysis issues for field settings*. Boston, MA: Houghton Mifflin.

Cooke, D. J., & Michie, C. (2001). Refining the construct of psychopathy: Towards a hierarchical model. *Psychological Assessment*, *13*, 171–188. doi:10.1037/1040-3590.13.2.171

Copas, J. B., O'Brien, M., Roberts, J., & Whiteley, J. S. (1984). Treatment outcome in personality disorder: The effect of social psychological and behavioural variables. *Personality and Individual Differences*, *5*, 565–573. doi:10.1016/0191-8869(84)90031-x

Copas, J. B., & Whiteley, J. S. (1976). Predicting success in the treatment of psychopaths. *British Journal of Psychiatry*, *129*, 388–392. doi:10.1192/bjp.129.4.388

Corsini, R. (1958). Psychodrama with a psychopath. *Group Psychotherapy*, *11*, 33–39.

Craft, M. (1968). Psychopathic disorder: A second trial of treatment. *British Journal of Psychiatry*, *114*(512), 813–820. doi:10.1192/bjp.114.512.813

Craft, M., Stephenson, G., & Granger, C. (1964). A controlled trial of authoritarian and self-governing regimes with adolescent psychopaths. *American Journal of Orthopsychiatry*, *34*(3), 543–554. doi:10.1111/j.1939-0025.1964.tb02224.x

David, D., & Montgomery, G. H. (2011). The scientific status of psychotherapies: A new evaluative framework for evidence-based psychosocial interventions. *Clinical Psychology: Science and Practice*, *18*(2), 89–99. doi:10.1111/j.1468-2850.2011.01239.x

Di Placido, C., Simon, T. L., Witte, T. D., Gu, D., & Wong, S. C. (2006). Treatment of gang members can reduce recidivism and institutional misconduct. *Law and Human Behavior*, *30*(1), 93–114. doi:10.1007/s10979-006-9003-6

Dolan, B., & Coid, J. (1993). *Psychopathic and antisocial personality disorders: Treatment and research issues*. London, UK: Gaskell.

Doren, D. M. (1987). *Understanding and treating the psychopath*. Oxford, UK: John Wiley & Sons.

D'Silva, K., Duggan, C., & McCarthy, L. (2004). Does treatment really make psychopaths worse? A review of the evidence. *Journal of Personality Disorders*, *18*(2), 163–177. doi:10.1521/pedi.18.2.163.32775

Edens, J. F., Marcus, D. K., Lilienfeld, S. O., & Poythress, N. G. (2006). Psychopathic, not psychopath: Taxometric evidence for the dimensional structure of psychopathy. *Journal of Abnormal Psychology*, *115*, 131–144. doi:10.1037/0021-843x.115.1.131

Eissler, K. R. (1949). Some problems of delinquency. In K. R. Eissler (Ed.), *Searchlights on delinquency* (pp. 3–25). New York, NY: International Universities Press.

Ermer, E., Cope, L. M., Nyalakanti, P. K., Calhoun, V. D., & Kiehl, K. A. (2012). Aberrant paralimbic gray matter in criminal psychopathy. *Journal of Abnormal Psychology*, *121*(3), 649–658. doi:10.1037/a0026371

Eysenck, H. J. (1977). *Crime and personality.* (3rd. Edition). New York, NY: Routledge.

Feighner, J. P., Robins, E., Guze, S. B., Woodruff, R. A., Winokur, G., & Munoz, R. (1972). Diagnostic criteria for use in psychiatric research. *Archives of General Psychiatry*, *26*(1), 57–63. doi:10.1001/archpsyc.1972.01750190059011

Forth, A. E., Kosson, D., & Hare, R. D. (2003). *The Hare PCL: Youth Version*. Toronto, ON: Multi-Health Systems.

Fox, V. (1961). Psychopathy as viewed by a clinical psychologist. *Archives of Criminal Psychodynamics*, *4*, 472–479.

Glenn, A. L., & Raine, A. (2013). Neurocriminology: Implications for the punishment, prediction and prevention of criminal behaviour. *Nature Reviews Neuroscience*, *15*, 54–63. doi:10.1038/nrn3640

Gregory, S., Simmons, A., Kumari, V., Howard, M., Hodgins, S., & Blackwood, N. (2012). The antisocial brain: Psychopathy matters—A structural MRI investigation of antisocial male violent offenders. *Archives of General Psychiatry*, *69*(9), 962–972. doi:10.1001/archgenpsychiatry.2012.222

Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.

Gough, H. G. (1948). A sociological theory of psychopathy. *American Journal of Sociology*, *53*(5), 359–366. doi:10.1086/220203

Gough, H. G. (1960). Theory and measurement of socialization. *Journal of Consulting Psychology, 24,* 23-30.

Hare, R. D. (1970). *Psychopathy*: *Theory and research*. Chichester, UK: John Wiley & Sons.

Hare, R. D. (1980). A research scale for the assessment of psychopathy in criminal populations. *Personality and Individual Differences*, *1*(2), 111–119. doi:10.1016/0191-8869(80)90028-8

Hare, R. D. (1991/2003). *Manual for the revised psychopathy checklist* (2nd ed.). Toronto, ON: Multi-Health Systems.

Hare, R. D. (1993). *Without conscience: The disturbing world of the psychopaths among us.* New York, NY: Simon & Schuster.

Hare, R. D. (1996). Psychopathy: A clinical construct whose time has come. *Criminal Justice and Behavior, 23,* 25–54.

Hare, R. D. (1998). Psychopathy, affect and behavior. In D. J. Cooke, A. E. Forth, & R. D. Hare (Eds.), *Psychopathy: Theory, research and implications for society* (pp. 303–354). Dordrecht, Netherlands: Kluwer.

Hare, R. D., Clark, D., Grann, M., & Thornton, D. (2000). Psychopathy and the predictive validity of the PCL-R: An international perspective. *Behavioral Sciences & the Law*, *18*(5), 623–645. doi:10.1002/1099-0798(200010)18:5<623::aid-bsl409>3.0.co;2-w

Hare, R. D., & Neumann, C. S. (2008). Psychopathy as a clinical and empirical construct. *Annual Review of Clinical Psychology*, *4*, 217–246. doi:10.1146/annurev.clinpsy.3.022806.091452

Hare, R. D., & Neumann, C. S. (2010). The role of antisociality in the psychopathy construct: Comment on Skeem and Cooke (2010). *Psychological Assessment*, *22*, 446–454. doi:10.1037/a0013635

Harpur, T. J., Hare, R. D., & Hakstian, R. (1989). A two-factor conceptualization of psychopathy: Construct validity and implications for assessment. *Psychological Assessment*, *1*, 6–17. doi:10.1037//1040-3590.1.1.6

Harris, G. T., & Rice, M. E. (2006). Treatment of psychopathy. In C. J. Patrick (Ed.), *Handbook of psychopathy* (pp. 555–572). New York, NY: Guilford Press.

Harris, G. T., Rice, M. E., & Quinsey, V. L. (1994). Psychopathy as a taxon: Evidence that psychopaths are a discrete class. *Journal of Consulting and Clinical Psychology*, *62*(2), 387–397. doi:10.1037//0022-006x.62.2.387

Hart, S. D., Cox, D. N., & Hare, R. D. (1995). *The Hare Psychopathy Checklist: Screening Version.* Toronto, Ontario: Multi-Health Systems.

Heaver, W. L. (1943). A study of forty male psychopathic personalities before, during and after hospitalization. *American Journal of Psychiatry*, *100*(3), 342–346.

Hobson, J., Shine, J., & Roberts, R. (2000). How do psychopaths behave in a prison therapeutic community? *Psychology, Crime & Law*, *6*(2), 139–154. doi:10.1080/10683160008410838

Huesmann, L. (1988). An information processing model for the development of aggression. *Aggressive Behavior*, *14*(1), 13–24. doi:10.1002/1098-2337(1988)14:1<13::aid-ab2480140104>3.0.co;2-j

Hughes, G., Hogue, T., Hollin, C., & Champion, H. (1997). First-stage evaluation of a treatment programme for personality disordered offenders. *Journal of Forensic Psychiatry*, *8*(3), 515–527. doi:10.1080/09585189708412273

Ingram, G. L., Gerard, R. E., Quay, H. C., & Levinson, R. B. (1970). An experimental program for the psychopathic delinquent: Looking in the "correctional wastebasket." *Journal of Research in Crime & Delinquency*, *7*(1), 24–30. doi:10.1177/002242787000700103

Jones, M. (1952). *Social psychiatry: A study of therapeutic communities.* London, UK: Tavistock Publications.

Kadden, R. M., Cooney, N. L., Getter, H., & Litt, M. D. (1989). Matching alcoholics to coping skills or interactional therapies: Posttreatment results. *Journal of Consulting and Clinical Psychology*, *57*(6), 698–704.

Kazdin, A. E., Siegel, T. C., & Bass, D. (1992). Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. *Journal of Consulting and Clinical Psychology*, *60*(5), 733–747. doi:10.1037//0022-006x.60.5.733

Kendall, P. C., & Hollon, S. D. (1979). Cognitive-behavioral interventions: Overview and current status. In P. C. Kendall & S. D. Hollon (Eds.), *Cognitive-behavioral interventions: Theory, research, and procedures*, 1–9. New York, NY: Academic Press.

Kiger, R. S. (1967). Treating the psychopathic patient in a therapeutic community. *Hospital & Community Psychiatry*, *18*, 191–196. doi:10.1176/ps.18.7.191

Langton, C. M., Barbaree, H. E., Harkins, L., & Peacock, E. J. (2006). Sex offenders' response to treatment and its association with recidivism as a function of psychopathy. *Sexual Abuse*, *18*(1), 99–120. doi:10.1177/107906320601800107

Latzman, R. D., Patrick, C. J., Freeman, H. D., Schapiro, S. J., & Hopkins, W. D. (2017). Etiology of triarchic psychopathy dimensions in chimpanzees (*Pan troglodytes*). *Clinical Psychological Science*, *5*(2), 341–354. doi:10.1177/2167702616676582

Lilienfeld, S. O. (1998). Methodological advances and developments in the assessment of psychopathy. *Behaviour Research and Therapy*, *36*, 99–125. doi:10.1016/s0005-7967(97)10021-3

Lilienfeld, S. O., Patrick, C. J., Benning, S. D., Berg, J., Sellbom, M., & Edens, J. F. (2012). The role of fearless dominance in psychopathy: Controversies, confusions, and clarifications. *Personality Disorders*, *3*, 327–340. doi:10.1037/a0026987

Lilienfeld, S. O., Smith, S. F., Sauvigné, K. C., Patrick, C. J., Drislane, L. E., Latzman, R. D., & Krueger, R. F. (2016). Is boldness relevant to psychopathic personality? Meta-analytic relations with non-psychopathy checklist-based measures of psychopathy. *Psychological Assessment*, *28*, 1172–1185. doi:10.1037/pas0000244

Lilienfeld, S. O., Watts, A. L., Smith, S. F., Berg, J. M., & Latzman, R. D. (2015). Psychopathy deconstructed and reconstructed: Identifying and assembling the personality building blocks of Cleckley's chimera. *Journal of Personality*, *83*, 593–610. doi:10.1111/jopy.12118

Logan, C., Rypdal, K., & Hoff, H. A. (2012). Understanding, treating and managing psychopathy: Moving on. *International Journal of Forensic Mental Health*, *11*(4), 239–241. doi:10.1080/14999013.2012.747574

Lösel, F. (1995). The efficacy of correctional treatment: A review and synthesis of meta-evaluations. In J. McGuire (Ed.), *What works: Reducing reoffending—Guidelines from research and practice* (pp. 79–111). Chichester, UK: John Wiley & Sons.

Lösel, F. (1998). Treatment and management of psychopaths. In D. J. Cooke, A. E. Forth, & R. D. Hare (Eds.), *Psychopathy: Theory, research and implications for society* (pp. 303–354). Dordrecht, Netherlands: Kluwer.

Lösel, F. (2001). Evaluating the effectiveness of correctional programs: Bridging the gap between research and practice. In G. A. Bernfeld, D. P. Farrington, & A. W. Leschied (Eds.), *Offender rehabilitation in practice* (pp. 67–92). Chichester, UK: John Wiley & Sons.

Lykken, D. T. (1995). *The antisocial personalities*. Hillsdale, NJ: Psychology Press.
Lynam, D. R., & Miller, J. D. (2012). Fearless dominance and psychopathy. *Personality Disorders*, *3*(3), 341–353. doi:10.1037/a0028296
Maas, J. (1966). The use of actional procedures in group psychotherapy with sociopathic women. *International Journal of Group Psychotherapy*, *16*(2), 190–197. doi:10.1080/00207284.1966.11642924
Mahoney, M. J. (1974). *Cognition and behavior modification*. Cambridge, MA: Ballinger.
Marcus, D. K., John, S. L., & Edens, J. F. (2004). A taxometric analysis of psychopathic personality. *Journal of Abnormal Psychology*, *113*(4), 626–635. doi:10.1037/0021-843x.113.4.626
McCord, W., & McCord, J. (1964). *The psychopath: An essay on the criminal mind*. Oxford, UK: D. van Nostrand.
Megargee, E. I. (1972). *The California Psychological Inventory handbook*. San Francisco, CA: Jossey-Bass.
Meichenbaum, D. (1977). *Cognitive-behavior modification: An integrative approach*. New York, NY: Plenum Press.
Miller, J. D., & Lynam, D. R. (2012). An examination of the Psychopathic Personality Inventory's nomological network: A meta-analytic review. *Personality Disorders*, *3*(3), 305–326. doi:10.1037/a0024567
Millon, T. (2011). *Disorders of personality: Introducing a DSM/ICD spectrum from normal to abnormal*. Hoboken, NJ: John Wiley & Sons.
Mobbs. D., Lau, H. C., Jones, O. D., & Frith, C. D. (2007). Law, responsibility, and the brain. *PLOS Biology, 5(4),* e103. doi: 10.1371/journal.pbio.0050103
Monti, P. M., Abrams, D. B., Kadden, R. M., & Cooney, N. L. (1989). *Treating alcohol dependence: A coping skills training guide*. New York, NY: Guilford Press.
Neumann, C. S., & Hare, R. D. (2008). Psychopathic traits in a large community sample: Links to violence, alcohol use, and intelligence. *Journal of Consulting and Clinical Psychology*, *76*(5), 893–899. doi:10.1037/0022-006x.76.5.893
Neumann, C. S., Hare, R. D., & Newman, J. P. (2007). The super-ordinate nature of the Psychopathy Checklist–Revised. *Journal of Personality Disorders*, *21*(2), 102–117. doi:10.1521/pedi.2007.21.2.102
Neumann, C. S., Malterer, M. B., & Newman, J. P. (2008). Factor structure of the Psychopathic Personality Inventory (PPI): Findings from a large incarcerated sample. *Psychological Assessment*, *20*, 169–174. doi:10.1037/1040-3590.20.2.169
Newman, J. P., & Kosson, D. S. (1986). Passive avoidance learning in psychopathic and nonpsychopathic offenders. *Journal of Abnormal Psychology*, *95*(3), 252–256. doi:10.1037//0021-843x.95.3.252
Ogloff, J. R., Wong, S., & Greenwood, A. (1990). Treating criminal psychopaths in a therapeutic community program. *Behavioral Sciences & the Law*, *8*(2), 181–190. doi:10.1002/bsl.2370080210
Olver, M. E., Lewis, K., & Wong, S. C. (2013). Risk reduction treatment of high-risk psychopathic offenders: The relationship of psychopathy and treatment change to violent recidivism. *Personality Disorders*, *4*(2), 160–167. doi:10.1037/a0029769
Olver, M. E., & Wong, S. C. (2009). Therapeutic responses of psychopathic sexual offenders: Treatment attrition, therapeutic change, and long-term recidivism. *Journal of Consulting and Clinical Psychology*, *77*(2), 328–336. doi:10.1037/a0015001

Patrick, C. J., Venables, N. C., & Drislane, L. E. (2013). The role of fearless dominance in differentiating psychopathy from antisocial personality disorder: Comment on Marcus, Fulton, and Edens. *Personality Disorders*, *4*(1), 80–82. doi:10.1037/a0027173

Patterson, G. R., Dishion, T. J., & Chamberlain, P. (1993). Outcomes and methodological issues relating to treatment of antisocial children. In Giles, Thomas R. (Ed.), *Handbook of effective psychotherapy* (pp. 43–88). New York, NY: Springer.

Polaschek, D. L., & Daly, T. E. (2013). Treatment and psychopathy in forensic settings. *Aggression and Violent Behavior*, *18*(5), 592–603. doi:10.1016/j.avb.2013.06.003

Polaschek, D. L., Wilson, N. J., Townsend, M. R., & Daly, L. R. (2005). Cognitive-behavioral rehabilitation for high-risk violent offenders: An outcome evaluation of the violence prevention unit. *Journal of Interpersonal Violence*, *20*(12), 1611–1627. doi:10.1177/0886260505280507

Quay, H. C. (1965). Psychopathic personality as pathological stimulation-seeking. *American Journal of Psychiatry*, *122*(2), 180–183. doi:10.1176/ajp.122.2.180

Reid, W. H., & Gacono, C. (2000). Treatment of antisocial personality, psychopathy, and other characterologic antisocial syndromes. *Behavioral Sciences & the Law*, *18*(5), 647–662. doi:10.1002/1099-0798(200010)18:5<647::aid-bsl407>3.0.co;2-o

Rice, M. E., Harris, G. T., & Cormier, C. A. (1992). An evaluation of a maximum security therapeutic community for psychopaths and other mentally disordered offenders. *Law and Human Behavior*, *16*(4), 399–412. doi:10.1007/bf02352266

Richards, H. J., Casey, J. O., & Lucente, S. W. (2003). Psychopathy and treatment response in incarcerated female substance abusers. *Criminal Justice and Behavior*, *30*(2), 251–276. doi:10.1177/0093854802251010

Rilling, J. K., Glenn, A. L., Jairam, M. R., Pagnoni, G., Goldsmith, D. R., Elfenbein, H. A., & Lilienfeld, S. O. (2007). Neural correlates of social cooperation and non-cooperation as a function of psychopathy. *Biological Psychiatry*, *61*(11), 1260–1271. doi:10.1016/j.biopsych.2006.07.021

Robins, L. N. (1966). *Deviant children grown up: A sociological and psychiatric study of sociopathic personality.* Baltimore, MD: Williams & Wilkins.

Salekin, R. T. (2002). Psychopathy and therapeutic pessimism: Clinical lore or clinical reality? *Clinical Psychology Review*, *22*(1), 79–112. doi:10.1016/s0272-7358(01)00083-6

Salekin, R. T., Worley, C., & Grimes, R. D. (2010). Treatment of psychopathy: A review and brief introduction to the mental model approach for psychopathy. *Behavioral Sciences & the Law*, *28*(2), 235–266. doi:10.1002/bsl.928

Sampson, R. J., & Laub, J. H. (1997). A life-course theory of cumulative disadvantage and the stability of delinquency. *Developmental Theories of Crime and Delinquency*, *7*, 133–161.

Serin, R. C., & Kuriychuk, M. (1994). Social and cognitive processing deficits in violent offenders: Implications for treatment. *International Journal of Law and Psychiatry*, *17*(4), 431–441. doi:10.1016/0160-2527(94)90018-3

Seto, M. C., & Barbaree, H. E. (1999). Psychopathy, treatment behavior, and sex offender recidivism. *Journal of Interpersonal Violence*, *14*(12), 1235–1248. doi:10.1177/088626099014012001

Sherman, L. W. (1993). Defiance, deterrence, and irrelevance: A theory of the criminal sanction. *Journal of Research in Crime & Delinquency*, *30*(4), 445–473. doi:10.1177/0022427893030004006

Skeem, J. L., & Cooke, D. J. (2010). Is criminal behavior a central component of psychopathy? Conceptual directions for resolving the debate. *Psychological Assessment*, *22*, 433–445. doi:10.1037/a0008512

Skeem, J. L., Monahan, J., & Mulvey, E. P. (2002). Psychopathy, treatment involvement, and subsequent violence among civil psychiatric patients. *Law and Human Behavior*, *26*(6), 577–603. doi:10.1023/a:1020993916404

Skeem, J. L., Polaschek, D. L., & Manchak, S. (2009). Appropriate treatment works, but how? Rehabilitating general, psychopathic, and high-risk offenders. In J. L. Skeem, K. S. Douglas, & S. O. Lilienfeld (Eds.), *Psychological science in the courtroom: Consensus and controversy* (pp. 358–384). New York, NY: Guilford Press.

Skeem, J. L., Polaschek, D. L., Patrick, C. J., & Lilienfeld, S. O. (2011). Psychopathic personality: Bridging the gap between scientific evidence and public policy. *Psychological Science in the Public Interest*, *12*, 95–162. doi:10.1177/1529100611426706

Spitzer, R. L., Williams, J. B., & Skodol, A. E. (1980). DSM-III: The major achievements and an overview. *American Journal of Psychiatry*, *137*(2), 151–164. doi:10.1176/ajp.137.2.151

Suedfeld, P., & Landon, P. B. (1978). Approaches to treatment. *Psychopathic Behavior*, 347–376.

Walsh, A., & Wu, H. H. (2008). Differentiating antisocial personality disorder, psychopathy, and sociopathy: Evolutionary, genetic, neurological, and sociological considerations. *Criminal Justice Studies*, *21*(2), 135–152. doi:10.1080/14786010802159814

Watt, M., Stewart, S., Birch, C., & Bernier, D. (2006). Brief CBT for high anxiety sensitivity decreases drinking problems, relief alcohol outcome expectancies, and conformity drinking motives: Evidence from a randomized controlled trial. *Journal of Mental Health*, *15*(6), 683–695. doi:10.1080/09638230600998938

Widiger, T. A., Cadoret, R., Hare, R., Robins, L., Rutherford, M., Zanarini, M.,…& Frances, A. (1996). DSM-IV antisocial personality disorder field trial. *Journal of Abnormal Psychology, 105(1),* 3-16.

Wong, S. C., & Hare, R. D. (2005). *Guidelines for a psychopathy treatment program*. Toronto, ON: Multi-Health Systems.

Wong, S. C., Gordon, A., Gu, D., Lewis, K., & Olver, M. E. (2012). The effectiveness of violence reduction treatment for psychopathic offenders: Empirical evidence and a treatment model. *International Journal of Forensic Mental Health*, *11*(4), 336–349. doi:10.1080/14999013.2012.746760

Wong, S. C., & Olver, M. E. (2015). Risk reduction treatment of psychopathy and applications to mentally disordered offenders. *CNS Spectrums*, *20*(3), 303–310. doi:10.1017/s1092852915000322

Yang, Y., & Raine, A. (2009). Prefrontal structural and functional brain imaging findings in antisocial, violent, and psychopathic individuals: A meta-analysis. *Psychiatry Research: Neuroimaging*, *174*(2), 81–88. doi:10.1016/j.pscychresns.2009.03.012

Yang, Y., Raine, A., Narr, K. L., Colletti, P., & Toga, A. W. (2009). Localization of deformations within the amygdala in individuals with psychopathy. *Archives of General Psychiatry*, *66*(9), 986–994. doi:10.1001/archgenpsychiatry.2009.110

Yochelson, S., & Samenow, S. E. (1977). *The criminal personality* (Vols. 1 & 2). New York, NY: Jason Aronson.