

CHAPTER 29

Treatment of Adults and Juveniles with Psychopathy

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Psychopathy is a form of personality pathology associated with varying degrees of social harm, which makes treatment an important goal. Lack of agreement about what psychopathy is, what causes it, and whether it is modifiable challenges the development of effective treatments. But the biggest barrier to knowledge about prevention and treatment to date has been the notable lack of research on whether change can be achieved—either in the harmful behavior associated with psychopathy, or in the condition itself.

One explanation for this dearth of research is the belief that the question of treatability has already been answered (Salekin, 2002). Hervey Cleckley, the progenitor of modern conceptions of psychopathy, appeared resigned to the fruitlessness of the treatment enterprise: “We do not at present have any kind of psychotherapy that can be relied upon to change the psychopath fundamentally” (1976, p. 439). Others agreed with this perspective, although with some hope for the future: “Traditional types of group or individual psychotherapies have not been shown to be effective. Novel approaches to the problem are needed” (Ogloff, Wong, & Greenwood, 1990, p. 188). Still others have been more sanguine. For example, after reporting evidence that a therapeutic community program actually *increased* violent recidivism among psychopathic offenders, Rice,

Harris, and Cormier (1992) noted that “although there are no outcome data with adult psychopaths, one could predict on the basis of differential association theory that programs that involve highly structured interaction with prosocial models who demonstrate anticriminal attitudes and ways of thinking would be a more promising treatment approach” (p. 409). Interestingly, with this speculation, Rice and colleagues foreshadowed some of today’s promising interventions.

Other obstacles to accumulating research evidence are more practical. In particular, it has been difficult to study psychopathy and treatment in adults (or youth) for measurement reasons. The vast bulk of research on psychopathy has been conducted with offenders using the Hare psychopathy inventories, which include the Psychopathy Checklist—Revised (PCL-R), the Psychopathy Checklist: Youth Version (PCL:YV), and the Psychopathy Checklist: Screening Version (PCL:SV; for a review of these measures, see Hare, Neumann, & Mokros, Chapter 3, this volume). Heavy reliance on these scales underrepresents heterogeneity among high-scoring offenders (e.g., differences in anxiety, fearfulness, emotional reactivity) that may have important implications for treatment, and has profoundly confounded the specific personality pathology of psychopathy with general factors related to criminal propensity. More broadly, the lack of psy-

chopathy instruments that are sensitive to change and basic methodological problems in measuring treatment-related change in offender samples (e.g., measurement of variables not linked to recidivism, lack of reliable measurement tools, lack of comparison groups) pose particular challenges.

In this chapter, we review available published studies that have directly addressed the treatability of high-psychopathic individuals. The pool of such studies is limited, but findings from these investigations paint a relatively optimistic picture. Before reviewing these findings, we contextualize work to be reviewed by noting that conclusions of “nothing works with psychopaths” echo broader conclusions reached prior to the late 1980s regarding the treatment of criminal offenders in general. Since that time, research by an influential group of Canadian psychologists has convincingly demonstrated that some treatments do indeed “work” to reduce risk for recidivism.

Effective Treatments with Criminal Offenders

Over the past quarter-century, a series of systematic statistical examinations of controlled intervention studies with offenders has identified elements of treatment that predict reductions in recidivism. Based on findings from these studies, offenders in general have begun to be regarded as treatable, with a steady growth of methodologically sound evaluation research feeding into a body of meta-analyses demonstrating that criminal risk can be reduced with effective treatments. In recent years, this literature has been dominated by offense-focused cognitive-behavioral, group-based interventions, but many other types of interventions have also shown effectiveness.

These meta-analyses have been used to establish a series of principles for the provision of programs and psychological treatments for offenders. Dissemination of this knowledge to correctional administrators and program providers has been enhanced by Andrews and Bonta's (2010; Bonta & Andrews, 2016) efforts to package these principles into what is now known as the RNR (“risk–need–responsivity”) model of offender treatment. Although the model includes 18 principles (all of which are important), these first three are the most familiar and are the focus here (Andrews, Bonta, & Hoge, 1990).

Put simply, treatment programs for offenders yield the largest reductions in criminal behavior

when they (1) target relatively intensive services toward higher-risk offenders (the *Risk* principle), leaving lower-risk offenders with little or no therapeutic attention, (2) focus treatment services on changing empirically documented risk factors for crime (e.g., criminal attitudes, substance abuse, impulsivity), termed “criminogenic needs” (the *Need* principle), and (3) deliver interventions in a manner that maximizes offenders' engagement in the treatment process and ability to use the treatment services to make changes (the *Responsivity* principle; Andrews et al., 1990; Andrews & Bonta, 2010; Bonta & Andrews, 2016).

Ideally, according to the RNR model, warm, enthusiastic, respectful, well-trained and well-supervised therapists spend considerable time using the most effective cognitive and behavioral techniques to work with higher risk offenders to change criminal risk factors (Bonta & Andrews, 2016). When clients demonstrate characteristics that challenge engagement and change—and if higher-risk clients have been chosen, they usually will—these therapists endeavor to work *with* the difficult characteristics (e.g., hostility, poor motivation, poor learning), rather than taking them as indicators that the client is not suitable for treatment. This attitude about “difficult clients” is important because a number of these same characteristics that disrupt the process of treatment also contribute to offense risk, making them more prominent in the very clients who are the highest priority for treatment.

In general, the more programs adhere to the RNR model's principles, the larger the reductions overall in reconviction risk. The impact on crime for those adhering to all three principles is modest but important, with reported effect sizes ranging from 0.15 to 0.34 (Andrews & Bonta, 2010a). Even an effect size of 0.15 is notable. For example, if 50% of untreated offenders had been reconvicted at follow-up, the corresponding rate for treated offenders given a 0.15 effect would be 35%—a relative reduction of more than 30%. But what is the more specific relevance of these findings to understanding research on psychopathy and treatment? As noted earlier, psychopathy in offenders usually refers to high scores on one of the Hare psychopathy inventories. These same scores are indicative of the level of criminal risk the offender poses (Douglas, Vincent, & Edens, Chapter 28, this volume). Although designed to measure and diagnose psychopathy, the PCL-R/PCL:SV's popularity with adult offenders is especially due to its utility in assessing risk of violent and other

criminal behavior (Skeem, Polaschek, Patrick, & Lilienfeld, 2011). PCL-R scores are about as accurate in risk prediction as purpose-built risk assessment inventories that do not index psychopathy at all (see Singh, Grann, & Fazel, 2011; Yang, Wong, & Coid, 2010).

So, in accordance with the risk principle (Andrews & Bonta, 2010a), high-PCL-scoring clients are high-risk offenders and should be among those most highly prioritized for intensive intervention rather than being considered ineligible for intervention because they are difficult to treat (Skeem, Polaschek, & Manchak, 2009). However, this correlation between PCL scores and criminality does not mean that psychopathy and criminal deviancy are synonymous. Although some researchers and clinicians tend to equate the two, our view is that this overlap reflects a consequence of the design of the PCL inventories rather than an inherent feature of psychopathy itself, a point to which we return later.

Treatment of Adults with Psychopathy

Effects on Violence and Other Criminal Behavior

Three studies of adult offenders have examined directly whether treatment reduces violent and other criminal behavior of psychopathic individuals, and the results of all three are positive. In a study that is unique for being conducted outside the criminal justice system, intensive treatment of civil psychiatric patients reduced violence regardless of PCL-R score (i.e., psychopathy did not moderate the effect of treatment; Skeem, Monahan, & Mulvey, 2002). High-PCL-scoring individuals who had completed fewer than six treatment sessions in the previous 10 weeks were 3.5 times more likely to be violent in the next 10 weeks than those who attended more sessions (even after researchers controlled for the treatment assignment process). Treatment in this study was “psychiatric treatment as usual.” The modal intervention was psychotherapy combined with psychotropic medication; the extent to which services could be characterized by RNR principles is unclear.

In the first of two correctional studies, graduates of an intensive RNR-based program for high-risk, violent adult prisoners (PCL:SV; $M = 17.8$) showed reductions in general and violent offending compared to matched untreated controls (Polaschek, 2011). And as in the Skeem and colleagues (2002) study, psychopathy scores—in this case, based on

the PCL:SV—were unrelated to violent reconviction ($r = .05$; Polaschek, 2008).

A second criminal justice study compared outcomes for two groups: (1) offenders with PCL-R scores above 25 ($n = 32$), who completed the Correctional Service of Canada’s Aggressive Behavior Control program, and (2) offenders matched for PCL-R Factor 1 and Factor 2 scores along with race and age at first conviction ($n = 32$), who received services as usual. Both samples had a very high base rate of subsequent convictions, and no significant differences were found on measures of recidivism per se (e.g., any reconviction, time to first reconviction). Given the small sample size, and the high rate of reoffending—an expected and common problem with high-risk offender outcome studies—sentencing indices were also examined as a proxy for new offense seriousness. On average, men who completed the Aggressive Behavior Control program received less severe sentences according to all indices, with group differences reaching statistical significance for the three most serious indices—longest sentence length, longest aggregate sentence, and total aggregated sentence length (Wong, Gordon, Gu, Lewis, & Olver, 2012). Thus, the two groups did not differ significantly on most outcome indices, but the most severe outcomes showed an effect in favor of treatment, especially when aggregated.

The results of these studies stand in contrast to those obtained in an evaluation of an experimental treatment program conducted in the 1960s. In this study, psychopathic offenders who received treatment while hospitalized at the Oak Ridge unit in Penetanguishene, Canada ($n = 46$) showed higher rates of violent (but not general) recidivism following release than a sample of untreated high-psychopathy prisoners matched on criminal history variables but not specifically on PCL-R scores (Harris, Rice, & Cormier, 1994). However, the treatment to which offender patients were subjected in this study was highly unconventional and ethically unacceptable by today’s standards (e.g., limited staff oversight of patients who were forced to spend days together naked in “encounter bubbles” with wall-mounted feeding tubes, having been administered various psychoactive substances including alcohol, methedrine, and LSD [lysergic acid diethylamide], for the purpose of “breaking through psychic defenses”).

Certain aspects of the “treatment” procedure evaluated in this study could well have contributed to the adverse outcomes reported. One source of harm may have been the punitive and non-

voluntary elements of the regimen. Patients were punished for not complying with program requirements but could not leave the program of their own accord. As evidence for this argument, time spent being punished for noncompliant behavior in treatment was correlated with later convictions for violent crimes, regardless of whether patients were psychopathic. Unsurprisingly, high-psychopathy offenders were judged to be more difficult patients; they were punished more, spent more time locked in bare cells on their own, and received more potentially harmful drugs (Rice et al., 1992). These experiences may simply have made them more angry and hostile—potential risk factors for new violence (Skeem et al., 2009). Thus, although the Rice and colleagues (1992) study provides corroborating evidence that psychopathy is associated with more challenges to the treatment process (e.g., noncompliance), and that programs can increase the risk of recidivism, at least in some clientele, it is silent on the issue of whether treatments that are generally effective in reducing violence are also effective for individuals with psychopathy (Polaschek, 2015).

Another challenge to the limited treatability literature reviewed earlier is that none of the three studies was a randomized controlled trial. No study of this type investigating psychopathic offenders' responses to empirically validated treatment has yet been published. Some reviewers conclude that with the absence of randomized controlled trial studies to date, there remains no convincing evidence that psychopathic offenders can benefit from treatment (Harris & Rice, 2006). However, we consider this stance to be unduly conservative. Several meta-analyses of intervention protocols for high-risk offenders have found little or no difference in effect sizes for randomized versus high-quality quasi-experimental designs (for a review, see Hollin, 2008). The studies reviewed in this chapter are high-quality, quasi-experimental designs that apply several credible methods to estimate treatment response (e.g., inclusion of treatment noncompleters in analyses; case-matching on criminal risk; use of propensity scores to statistically control for nonrandom assignment to treatment and comparison groups). In our view, these studies are rigorous enough to challenge lingering beliefs that the risk for commission of new crime by high-psychopathy offenders is impervious to intervention. Furthermore, these studies document that following treatment, PCL-defined psychopathy no longer predicts outcomes, despite its ability to do so in the absence of treatment. However,

such outcome studies are rare at this point, and those that are available do not shed light on why or how treatment completion leads to reduced reconviction (Kroner & Yessine, 2013). Beyond this need, it will be important to show that basic psychopathic tendencies are amenable to change, and that these changes relate to improved long-term outcomes.

Effects on Risk Factors for Recidivism

Studies reviewed in this section address the question of whether there is evidence that the mechanism for change in recidivism outcomes for psychopathic offenders is improvement in areas targeted by treatment—specifically, those linked to risk of reconviction. We refer to treatment targets here as *variable risk factors* (see Monahan & Skeem, 2014); but in the language of the RNR model, they are referred to as *criminogenic needs* or *dynamic risk factors* (Bonta & Andrews, 2016).

Studies that assess relations between change in these factors (i.e., after vs. before treatment) and the subsequent recidivism of psychopathic offenders are few. Instead, research to date has been preoccupied with whether PCL scores per se are correlated with treatment “success” variables that may not index within-person change (e.g., homework completion, quality of offense cycle or relapse prevention plans) and also may not themselves be predictive of recidivism (Langton, Barbaree, Harkins, & Peacock, 2006; Looman, Abracen, Serin, & Marquis, 2005; Seto & Barbaree, 1999). As high-risk offenders, those with psychopathy would be expected to commence treatment with poorer scores on treatment targets because these targets cumulatively comprise that risk. Studies that do not compare reassessments following treatment with baseline measurements prior to treatment cannot answer the more important question of whether any offenders have benefited from intervention. And even if higher PCL scorers make *more* change than lower-risk offenders, they still may remain more problematic at treatment's end, by virtue of retaining higher scores on risk-related problems because their scores started much higher.

Two studies to date have successfully used a purpose-designed offender change measure to demonstrate that change in individuals with psychopathy can be greater in those who avoid reconviction after treatment. In both studies, trained raters retrospectively scored a version of the Violence Risk Scale (VRS: Wong & Gordon, 2006; VRS-SO [Sex Offender version]: Wong, Olver, Nicholai-

chuk, & Gordon, 2003), after extracting relevant information from file records at two time points (beginning and end of intervention). Raters were blind to recidivism outcomes. The VRS is highly useful for evaluating the effects of treatment on variable risk factors because it (1) actuarially assesses initial level of risk on each of a large array of variable risk factors (e.g., sexual preoccupation, substance abuse, impulsivity, criminal attitudes); (2) determines, for each offender, which risk factors are treatment goals; (3) measures progress against these goals; and (4) aggregates indices of progress into a change score that estimates how much risk reduction occurred from the start to the end of treatment.

Olver and Wong (2009) found that psychopathic men in an intensive high-risk sex offender program were judged over the course of treatment to have made measurable progress on the VRS-SO's risk-related treatment targets. Most compellingly, the more these offenders changed, the less likely they were to be reconvicted of sexual and violent offenses. A second study from this research group focused on serious high-risk violent offenders (PCL-R $M = 26$). Paralleling results from the earlier study of sex offenders, the more that these predominantly psychopathic offenders changed in VRS risk factors over treatment, the less likely they were to be reconvicted for violent offenses (Lewis, Olver, & Wong, 2013).

These two studies, then, document change in PCL-psychopathic offenders during treatment, then statistically link that improvement to actual reductions in serious criminal outcomes. One obvious limitation of these studies is that there is no untreated comparison group; we therefore cannot be certain the change is a consequence of program attendance. However, elsewhere, there is evidence that both programs produced change. Outcome evaluations showed that attendance was associated with reduced recidivism relative to an untreated comparison group (Olver & Wong, 2013; Wong et al., 2012). Although untreated comparison subjects were not assessed for change in VRS risk factors, the comparative reduction in recidivism for treated individuals is indicative of program impact.

In conjunction with the recidivism results described in the preceding paragraphs, these studies of treatment-related change suggest that PCL-psychopathic offenders can indeed be effectively treated through intensive services, that effective treatment can reduce risk, and that effective treatment renders PCL scores irrelevant as indicators

of outcome. Although the current pool of relevant research is certainly small, it is clear that this topic is worthy of ongoing systematic investigation.

Effects on the Process of Treatment

We noted in the opening of this chapter that individuals with psychopathy have been viewed as untreatable. Yet the research on their treatability in criminal justice settings makes it clear that there is no empirical justification for this conclusion; available research indicates that high-psychopathic individuals, just like other high-risk offenders, can benefit from treatment focused on modifying variable risk factors. In fact, this research seems to argue that psychopathic individuals should be regarded as high-risk offenders—difficult, high-need, complex cases for sure—but not distinctly impervious to treatment.

However, for many therapists, treatability is not just about outcome—it encompasses other important considerations as well. For example, therapists may believe that to make changes, clients need to be willing and able to engage with the intervention being offered. A treatment program has little value if most of the target clients refuse the opportunity to attend, start but fail to complete the process, or complete it but without appreciable benefit. And in more conventional psychotherapy contexts, client treatability may be judged on the basis of psychological mindedness (Farber, 1989), compliance with therapist direction, or simply verbal fluency (e.g., young, attractive, verbal, intelligent, skilled [YAVIS] clients; cf. Polaschek, 2010; Wormith & Olver, 2002).

Just as classroom teachers may regard hostile, noncompliant, and egocentric students as “unteachable” even if they attain passing grades, psychotherapists may similarly base ideas about treatability on their experiences of a challenging therapy *process* with the client, that is, on perceived readiness of an offender for treatment and treatment responsivity. In fact, treatment progress—in the context of ongoing challenges to the therapeutic process—may be particularly likely to go unnoticed in difficult offender cases when therapists have no objective pre–post measures of client progress, and when challenging referrals are mixed with more immediately acquiescent clients.

There is no doubt that high-risk offenders can be construed as relatively untreatable by a therapist who does not find a challenging treatment process enjoyable. An extensive research base—separate from published work using the PCL

scales—identifies characteristics of offenders that emerge with increasing levels of criminal risk. As risk increases, the overall picture is one of mounting treatment-impeding behavior, with risk factors manifesting themselves in the treatment process itself. High-risk offenders are often angry and irritable, prone to feeling victimized, suspicious of others' motives, antagonistic, aggressive, untrustworthy, egocentric, noncompliant, and uncommitted to change (Blackburn, 1999; Krueger et al., 1994; Lowenkamp & Latessa, 2004; Moffitt, 2003; Ross, Fabiano, & Ewles, 1988). The central concern of crime-reducing therapies is helping offenders learn new skills, but higher risk offenders make poor "students." They do not persist with treatment when they find tasks hard. They lack self-reflection and self-control (Cale, 2006). To make matters worse, high-risk offenders are known to exhibit high rates of verbal ability deficits, along with neuropsychological impairments, a history of school failure, and negative attitudes toward new learning (Golden, Jackson, Peterson-Rohne, & Gontkovsky, 1996; Moffitt, Lynam, & Silva, 1994). These findings suggest that a range of complications associated with criminal risk alone (impaired self-control, learning, trust, motivation, etc.) may be sufficient to explain why offenders identified as high-risk on the basis of PCL-psychopathy scores will be experienced as difficult to treat.

In a similar vein, PCL scores show direct associations with a range of negative personal characteristics relevant to treatment. Individuals with high PCL scores tend to be evasive, verbally combative, hostile, prevaricating, disruptive and less ready to change, less committed to adjunct activities such as work and education, and more likely to be removed from, or leave treatment prematurely, compared to lower-scoring offenders (Alterman, Rutherford, Cacciola, McKay, & Boardman, 1998; Caldwell, McCormick, Umstead, & van Rybroek, 2007; Chakhssi, de Ruiter, & Bernstein, 2010; Hildebrand, de Ruiter, & de Vogel, 2004; Hobson, Shine, & Roberts, 2000; Ogloff et al., 1990; Olver & Wong, 2009; Olver, Wong, Nicholaichuk, & Gordon, 2007; Rice et al., 1992; Richards, Casey, & Lucente, 2003; Seto & Barbaree, 1999; Taft, Murphy, Musser, & Remington, 2004; see also Salekin, Worley, & Grimes, 2010). However, it bears repeating (see studies reviewed earlier) that PCL scores themselves do not predict treatment outcome, further highlighting the importance of distinguishing between therapists' subjective experience of the process of treating psychopathic offenders and well-anchored judgments of whether

offenders benefit when treated. Additionally, researchers examining both treatment process and outcome have not yet tried to separate psychopathy as a form of personality pathology from criminal risk. For example, researchers to date have not controlled for scores on a general risk assessment inventory to examine whether PCL scores—particularly Factor 1 scores, which are most distinctively characteristic of psychopathy—add incremental validity in predicting treatment challenges and gains.

To conclude, although research indicates that offenders with high PCL scores tend to challenge the treatment process, the extant evidence shows they still profit in general from that treatment, and there is no support for the view that psychopathic traits per se pose any unique problems for treatment beyond features generally associated with high criminal risk.

Effects on Psychopathic Traits

In the criminal justice system, the top priorities for intervention should be to reduce criminal offending and increase community safety. But as we noted at the outset, psychopathy is personality pathology, and thus worthy of therapeutic attention in its own right—that is, aside from its interface with criminal justice concerns. Is there any direct evidence that traits associated with the clinical condition of psychopathy change as a function of treatment?

With adults, we have found no methodologically sound research demonstrating change in symptoms of psychopathy as a function of treatment. In fact, we have found no research that addresses this issue explicitly, and there is no validated measure designed to index such change, though promising new interview-based approaches are under development (e.g., Comprehensive Assessment of Psychopathic Personality [CAPP]; Cooke, Hart, Logan, & Michie, 2012; Cooke & Logan, Chapter 9, this volume), and self-report inventories may hold potential to serve as monitors of treatment change. In a single study with younger people, Caldwell, McCormick, Wolfe, and Umstead (2012) reported encouraging evidence for treatment-induced reductions in scores on the Antisocial Process Screening Device (APSD; Frick & Hare, 2001), a teacher- and parent-rated measure. Specifically, changes in scores on the APSD as a whole and on each of its subscales (Callous-Unemotional, Narcissism, Impulsivity) correlated with improvements in institutional and treatment

behavior. However, this study lacked a comparison group; therefore, observed changes could not be clearly attributed to the treatment itself.

In contrast to approaches based on the RNR principles, Baskin-Sommers, Curtin, and Newman (2015) took an innovative psychopathology-based approach, applying a brief cognitive remediation treatment to a core mechanism in psychopathy: the tendency to allocate insufficient attention to affective stimuli that are outside the scope of current goals. This deficit has been referred to as a problem of attention to context, or the response modulation hypothesis. Baskin-Sommers and colleagues had high-PCL offenders take part in six weekly, hour-long sessions, in each of which they completed three computerized tasks. After training, they showed improvement on not only the trained tasks but also on similar untrained tasks administered before and after the treatment. High-PCL prisoners who completed a different type of intervention not related to this deficit did not show similar improvements, nor did a sample of prisoners with a different type of cognitive-affective deficit but given the psychopathy-specific intervention. The study is preliminary: Evidence for the response modulation hypothesis on which it is based is, at best, mixed (Skeem et al., 2011); the study does not connect training-related change to outside behavioral change, symptom evaluation, or recidivism; any direct effects on psychopathic traits are unknown. However, this work provides evidence for a novel experimental treatment approach that may merit further investigation and serves to link this clinical condition to the growing body of research on cognitive remediation of psychopathology (Onken, 2015)

There is certainly value to society in reducing the severity of the underlying personality pathology in psychopathy, if such an aim is achievable. Many therapists are concerned with not only reducing the capacity for criminal harm but also ameliorating other serious harm that their clients can inflict. As an example: A man who is seeking to reduce his perpetration of domestic violence may proudly declare that instead of hitting his partner during a fight, he has progressed to punching the wall beside her head. Although likely to result in less physical injury, this “progress” remains problematic with regard to the partner’s overall psychological well-being. Should treatment stop there, though, given that he is no longer committing a crime?

Older interventions for psychopathy, while probably largely ineffective, were primarily conducted

as mental health treatments, concerned with treatment aims rather broader than the current focus on reducing criminal offending risk (Salekin, 2002). However, even in mental health settings, treatment of psychopathy has received scant research attention, particularly in recent years (Galietta & Rosenfeld, 2012). In several services, experimental programs are underway that entail a broader personality pathology focus (e.g., based on Young and colleagues’ schema therapy [Bernstein et al., 2012; Young, Klosko, & Weishaar, 2003], or using a cognitive–interpersonal approach [Saradjian, Murphy, & McVey, 2013]), though outcome data are not yet available.

At present, risk reduction treatment in criminal justice settings remains by far the most common therapy offered to psychopathic offenders, and it recognizes a distinction between changing behavior and changing personality traits (e.g., Polaschek & Kilgour, 2013; Tew & Atkinson, 2013; Wilson, Kilgour, & Polaschek, 2013; Wong, 2013; Wong et al., 2012). Though not yet empirically founded, this dichotomy has intuitive appeal for at least two reasons. First, treatment referrals in the criminal justice system are usually directed at changing crime-related behaviors rather than personality characteristics. Second, traits are assumed to be intractable; for example, Wong (2000) argued that “it is unrealistic to try to change the psychopath’s personality structure” (p. 99), leading some to recommend that therapists should work around psychopathic traits rather than targeting them directly (Doren, 1987; Wong, 2000; Wong & Hare, 2005).

Correctional psychologist Stephen Wong, an expert on the treatment of psychopathy in custodial settings, recently proposed a two-component model for the treatment of psychopathy that reflects this distinction (Wong, 2013; Wong et al., 2012). Wong conceptualizes psychopathy as it is measured and defined by the PCL-R, and his two components are based on the view that the two subscales of the PCL-R respectively index the basic personality traits of psychopathy (Factor 1 [F1]) and the chronically antisocial and unstable behaviors associated with the condition (Factor 2 [F2]).

Based on these two symptomatic factors, Wong and colleagues propose that treatment should be envisioned as comprising an interpersonal component (treatment-interfering behaviors) and a criminogenic component (variable risk factors for crime, including violence). Effective treatment *manages* the F1 characteristics (see Wong &

Hare, 2005, for practical strategies) to enable risk-reducing *change* in the F2 characteristics. Wong and colleagues (2012; Wong, 2013) argue logically that reducing F2 scores effectively reduces PCL-psychopathy scores overall, and hence is a viable focus of treatment for psychopathy. They note further that F2 scores are static proxies for extended antisocial propensity, consistent with the superiority of F2 in predicting criminal outcomes and violence (Skeem et al., 2011), and conclude that the empirical evidence supports the focus on changing F2-related factors as a means for reducing recidivism.

The simplicity of this model is likely to give it significant heuristic appeal for therapists. However, the model makes a number of questionable assumptions. First, the PCL-R is an inventory for assessing psychopathy, and Wong's model treats it as synonymous with the construct of psychopathy itself. Others in the field have pointed out that clarification of what the essential components of psychopathy comprise requires consideration of a richer range of sources than the factor structure of a single assessment device (Patrick & Drislane, 2015; Skeem et al., 2011). Second, PCL F2 characteristics are very unlikely to be unique to offenders with psychopathy. Studies of the heterogeneity of offenders with antisocial personality disorder indicate that a range of personality characteristics is associated with a chronically unstable and antisocial lifestyle (Poythress et al., 2010), not all of which are F1 characteristics. In fact, PCL F2 appears to be largely indicative of general disinhibition (Patrick, Hicks, Krueger, & Lang, 2005; Skeem et al., 2011), which in turn is associated with personality characteristics other than those operationalized in F1. Therefore, reductions in F2, while statistically reducing overall PCL-R scores, do not necessarily correspond to reductions in psychopathy; therefore, the treatment of F2 is not the treatment of psychopathy *per se*.

Last, Wong (2013) notes that it is F2 that should be prioritized for treatment, since it carries most of the unique predictive power of the PCL-R for crime and violence, a view well supported by recent meta-analyses (e.g., Kennealy, Skeem, Walters, & Camp, 2010; Yang et al., 2010). Wong proposes that treatment-interfering behaviors arise from F1 characteristics. However, F2 and F1 correlate about 0.5, indicating that statistically they share about a quarter of their variance. One clinical consequence of this overlap may be that by working around, or *managing* rather than attempting to change F1 tendencies, therapists will avoid some

important potential mechanisms for indirectly influencing F2 characteristics. Furthermore, even if therapists avoid engaging with F1 tendencies as targets for treatment, various treatment-interfering behaviors occurring in the intervention context are, as discussed earlier, manifestations of risk factors for crime and violence.

Studies cited by Wong as supporting the importance of F1 as a source of treatment-interfering behavior actually focus mainly on total PCL-R scores rather than disaggregating by factor scores. The sole exception, a study by Hobson and colleagues (2000), did not show that F1 is more associated with treatment disruption than F2. In fact, high levels of disinhibitory tendencies associated with F2 can certainly lead to what Wong refers to as "Offence Analog Behaviors" (Wong, 2013, p. 6–15)—manifestations of criminal behavioral processes that are seen in the treatment context. Examples of F2-related behaviors that could disrupt the treatment process include affective dysregulation, self-harm, substance abuse, and attempts to manage anxiety by dominating and intimidating others in group. These behaviors are likely to be underpinned by their own difficult-to-change personality traits (Poythress et al., 2010). In view of these complexities, focusing on F2 characteristics will still require therapists to work to *change*, not just *manage*, disruptions to the treatment process.

Wong (2013) and colleagues (Olver & Wong, 2009; Wong et al., 2012) have done much to advance current understanding of the treatment of high-PCL-scoring offenders in custodial settings. Their two-component model may have several beneficial influences on practice with psychopathic individuals—for example, encouraging therapists to think more clearly about achievable goals in treatment, and to develop a matter-of-fact attitude to working with treatment disruption—but the model should be regarded as a rubric rather than a rehabilitation theory and should not preclude more nuanced empirical investigations of the treatment of psychopathy. Wong and colleagues have provided some very helpful guidelines for treatment, but in our opinion, these guidelines are best viewed as directed toward the criminal risk-reducing treatment of psychopathic individuals, not the treatment of psychopathy in its essence. By making this distinction, we preserve the important boundaries between personality pathology and criminal risk, and between an assessment measure and the construct it imperfectly operationalizes. More broadly, whether our approach to treatment should differ for psychopathic high-risk

offenders versus high-risk offenders in general, and whether psychopathy itself can be treated, are fascinating questions that await further practice innovation and research.

Are core psychopathic traits intractable? Although this specific question remains to be answered, the prevailing view that dispositions are unchanging in adulthood continues to fuel arguments against the possibility of treating psychopathic traits (McCrae & Costa, 1994). However, this view is contradicted by more recent research. First, both longitudinal and cross-sectional studies show, for example, that self-control, warmth, and emotional stability tend to increase throughout adulthood (Roberts & Mroczek, 2008). Even for personality disorders, longitudinal improvement has been documented (Caspi, Roberts, & Shiner, 2005; Seivewright, Tyrer, & Johnson, 2002). A second argument is that newer treatments for putatively “intractable” conditions such as borderline personality disorder (BPD) have led to clinical improvements (Clarkin, Levy, Lenzenweger, & Kernberg 2007). Notably, psychopathy shows extensive comorbidity with other personality disorders (Kirkpatrick et al., 2010), including BPD (Newhill, Vaughn, & DeLisi, 2010). A third point is that some intensive treatment programs for high-risk offenders arguably already target psychopathy-relevant traits, if not intentionally. These programs focus on modifying various manifestations of risk factors (e.g., grandiosity and arrogance toward others, low empathy, callousness and lack of guilt, conning, lying to and manipulating others). Without concerted intervention, these features tend to function as relatively trait-like stable psychological characteristics (Mann, Hanson, & Thornton, 2010; Ward, Polaschek, & Beech, 2006). For example, characteristics such as these form the basis for ratings of offenders’ treatment progress, using the VRS (Lewis et al., 2013). Progress in modifying variable risk factors may turn out to be progress in altering core psychopathic traits, perhaps beyond their overt behavioral manifestations.

Variants of Psychopathy and Treatment

Although many types of psychopathy have been described, the most common subtypes are primary and secondary, based mainly on a theory articulated by Benjamin Karpman (1941), a contemporary of Cleckley. Karpman’s clinically based theory has received some empirical support from recent cluster-analytic studies distinguishing subgroups

among offenders high in psychopathy, as indexed by the PCL-R (see Hicks & Drislane, Chapter 13, this volume). Taken together, findings from these studies point to two subgroups (labeled “primary” and “secondary,” respectively, by Skeem, Johansson, Andershed, Kerr, & Louden [2007], after Karpman [1941]), one similar to Cleckley’s original description (i.e., emotionally resilient but shallow, and insensitive to others’ feelings) and the other neurotic, prone to negative emotionality (anxiety, mood disorders, irritability), socially avoidant, reactively aggressive, and with high rates of childhood maltreatment.

Karpman (1941) speculated that individuals with secondary psychopathy would be more responsive to treatment than those with primary psychopathy. If Karpman’s postulate were in fact correct, a failure to account for these variants in treatment research could dilute or conceal differential treatment effects. Only one empirical study to date, by Poythress and colleagues (2010), has examined differential treatment responsivity among psychopathy variants. These investigators identified subgroups among 193 offender residents from drug treatment facilities through a cluster analysis of variants consisting of PCL-R symptom facets, trait-scale scores, and reported abuse/trauma history. They compared these subgroups with respect to treatment behavior, motivation for treatment, and treatment gain as assessed by counselor ratings. They found that offenders classified into a subgroup reflecting secondary psychopathy attended treatment more reliably and showed higher treatment motivation than offenders classified into a primary psychopathy subgroup, but no differences between these groups were found on disruptive behavior or skill mastery, or on the proportion of group members judged to be “treatment successes” (p. 396).

Related to these results, recent research with high-risk male prisoners from New Zealand suggests that secondary characteristics such as negative emotionality may be a surprisingly prominent feature of the treatment process for psychopathic offenders. Specifically, a substantial proportion (27%) of a sample of 198 men who scored in the psychopathic range on the PCL:SV ($M = 19.4$, 53% at or above 20) self-reported extensive psychopathology on the Millon Clinical Multiaxial Inventory (Millon, 1997), including both internalizing and externalizing symptoms (Polaschek, 2008). This pattern of results suggests that secondary psychopathy may be quite common in correctional settings, if not as common as primary psy-

chopathy (characterized in this research by a lack of reported psychopathology other than antisocial/narcissistic symptoms and drug/alcohol abuse; cf. Sissons & Polaschek, 2017). In fact, a follow-up study of these participants revealed that those who exhibited anxiety during treatment were in the majority, based on independent ratings of treating therapists' notes (Daly & Polaschek, 2013).

Furthermore, in keeping with other research with both adults (Poythress et al., 2010) and adolescents (Kimonis, Skeem, Cauffman, & Dmitrieva, 2011), there is evidence that those offenders classified as having secondary psychopathy are more likely to reoffend following release than their primary psychopathy counterparts. Daly and Polaschek (2013) found that secondary psychopathic offenders, who showed modestly higher overall PCL:SV scores than primary psychopathic offenders ($M = 21.4$ vs. 20.1) as a function of significantly higher F2 scores (with no difference on F1), were rated as more anxious by their therapists and were more likely to be reconvicted following treatment. Intriguingly, therapists' ratings of anxiety in treatment predicted violent reconviction along with scores on PCL F2 (Daly & Polaschek, 2013). These results provide further evidence that consideration of psychopathy subtypes in treatment research can help to advance intervention efforts—for example, by guiding therapists and program designers in how to “tune in” better to heterogeneity among high-risk offenders and apply intervention strategies that fit with the relevant variability in responsiveness and risk factors indicated by such heterogeneity.

Treatment of High-Risk Juveniles with Psychopathic Features

As suggested earlier, a number of controlled studies indicate that adult offenders with psychopathic traits respond to well-designed, intensive treatment with reduced violence and other criminal behavior. As we show next, these conclusions seem to apply with even greater force to children and adolescents with antisocial behavior and psychopathic features, who are at risk for repeated involvement in the justice system (for a review, see Skeem, Scott, & Mulvey, 2014). In this section, we (1) highlight our conceptualization of these juveniles and (2) review rigorously designed treatment studies relevant to this group. We conclude the chapter by summarizing major questions for future research and policy, first for youth, then for adults.

Conceptualization and Terminology

Juvenile psychopathy has been studied in two overlapping but distinguishable ways (Skeem, Manchak, Lidz, & Mulvey, 2012): (1) as its own entity, using measures that extend the PCL-R downward, developmentally (e.g., the PCL:YV, Forth, Kosson, & Hare, 2003) and (2) as a subtype of conduct disorder, using measures of “callous–unemotional” features (i.e., deficient empathy, guilt, caring, and poverty in emotional expression; see Frick, Ray, Thornton, & Kahn, 2014). Both approaches include externalizing–antisocial behavior (“Factor 2”) and interpersonal–affective features that are more specific to psychopathy (“Factor 1”). For the purpose of this review, our definition of psychopathy encompasses both approaches because both identify high-risk juveniles (i.e., young people at risk for violence and other antisocial behavior; for a review, see Skeem et al., 2012). For example, scores on the PCL:YV are strongly associated with, and tend to predict recidivism as effectively as, scores on purpose-built risk assessment tools (e.g., Edens, Campbell, & Weir, 2007; Hilterman, Nicholls, & van Nieuwenhuizen, 2013).

Although it tends to be assumed that high-risk youth represent “the most hardened and least likely to respond to treatment” (Lipsey, Wilson, & Cothorn, 2000, p.6), there is little support for this assumption. In fact, as compelling evidence to the contrary, Lipsey (2009) concluded from a meta-analysis of 548 controlled studies of programs for adolescent offenders published before 2002 that “there was no indication that there were juveniles whose risk level was so high that they did not respond to effective interventions” (Lipsey, Howell, & Kelly, 2010, p. 23). Instead, meta-analytic evidence indicates that core principles of effective correctional services for antisocial behavior—including the risk principle—generalize to young people (for a review, see Skeem et al., 2014).

Similarly, there is little support for the notion that “psychopathic” juveniles are a homogeneous group marked by qualitatively distinctive causal processes that inevitably lead to persistence of offending into adulthood (for reviews, see Frick et al., 2014; Skeem et al., 2012, 2014). For example, the weight of evidence using taxometric techniques indicates that psychopathy is a dimensional trait or configuration of traits rather than a discrete category (or taxon) that exists in nature (see Edens, Marcus, & Vaughan, 2011; Skeem et al., 2012). Measures of juvenile psychopathy predict short-term recidivism much better than they

do offending into adulthood (Olver, Stockdale & Wong, 2012; Stockdale, Olver, & Wong, 2010). And, as detailed below, rigorous treatment research provides virtually no support for the “insinuation that callous–unemotional traits in childhood are more immutable than conduct disorder symptoms, and [that] children who exhibit these traits are destined to become adult ‘psychopaths’” (Kolko & Pardini, 2010, p. 722).

In our view, high-risk juveniles—including those with psychopathic features—are characterized mainly by an increased magnitude or severity of risk factors relative to other young offenders; that is, they differ from other young offenders more in degree than in kind. Given this conceptualization, developmental processes and contextual risk factors emphasized in juvenile interventions can be considered relevant to this population. For example, peer groups are key sources of influence during adolescence, and weak ties to conventional peers, ties to delinquent peers, and gang membership are strong risk factors for offending (Hawkins et al., 1998). Adolescents are also more driven toward risk taking when in the presence of peers than when alone (see Steinberg, 2009). Juveniles with psychopathic features are not immune to such influences. Youth with pronounced psychopathic features are likely to be integrated into delinquent peer groups (Kimonis, Frick, & Barry, 2004), commit crimes in groups (Goldweber, Dmitrieva, Cauffman, Opiquero, & Steinberg, 2011), obtain low scores on measures of resistance to peer influence (Thornton, 2012), and engage in antisocial behavior that is significantly predicted by peer delinquency (if modestly less so than those with low-moderate psychopathic features; Kerr, Van Zalk, & Stattin, 2012).¹

The point is that juvenile offenders with psychopathic features are—first and foremost—juveniles. Adolescence is an extended period of enormous developmental change that can confer both risk and opportunity for maximizing the effects of intervention (Crone & Dahl, 2012) on high-risk offenders (Skeem et al., 2014). For this reason, in reviewing relevant treatment research below, we consider findings (when possible) by age group. We use the terms “childhood” to refer to ages younger than 10, “early adolescence” for ages 10–13 (which typically marks hormonal changes at the onset of puberty), and “mid–late adolescence” for ages 14–18 (Crone & Dahl, 2012). Also, because youth with psychopathic features vary in such features themselves, we use the term “psychopathy” to refer to global measures that include

general disinhibition/externalizing symptoms (and that overlap with measures of general risk), and “callous–unemotional” as a referent for more specific measures.

Synthesis of Rigorous Treatment Studies

High-quality research specific to the treatment of juvenile offenders with psychopathic features is not extensive. However, it is certainly more plentiful than research of this type with adults, and it includes a sufficient number of studies that meet basic methodological standards to permit interpretation. We focus our review on studies with (1) relatively large sample sizes (to ensure adequate power and stable results), (2) an experimental design or quasi-experimental design with a well-matched control group (to ensure that treatment effects can be assessed), and (3) measures of outcome that include change in antisocial behavior and/or psychopathic traits (ideally, over a reasonable posttreatment follow-up period). We exclude the weakest studies, that is, uncontrolled studies of whether high scores on measures of psychopathy or callous–unemotional features predict posttreatment antisocial behavior or other “outcomes.” Uncontrolled studies provide no information about treatment response because they fail to address the counterfactual question of how much antisocial behavior would have been observed for comparable individuals *without* treatment. We specifically emphasize the rarer and strongest studies—namely, those that test whether treatment affects *trajectories* of antisocial behavior over time (for an excellent example, see Hyde et al., 2013). Studies of this type are best positioned to evaluate whether callous–unemotional features—which are strongly associated with serious conduct problems that can themselves be “treatment resistant”—uniquely complicate the treatment process.

Methods and results for the six studies that best meet the previously mentioned criteria are summarized in Table 29.1. Three studies largely focus on mid–late adolescent offenders (Butler, Baruch, Hickey, & Fonagy, 2011; Caldwell, Skeem, Salekin, & Van Rybroek, 2006; Manders, Deković, Asscher, van der Laan, & Prins, 2013), two focus on clinic-referred children and early adolescents (Dadds, Cauchi, Wimalaweera, Hawes, & Brennan, 2012; Kolko et al., 2009), and one focuses on toddlers (Hyde et al., 2013). As might be expected (given the rigor of the designs), most of the studies (i.e., five of the six) focus on packaged treatment programs for conduct problems.

The main conclusion that can be drawn from these studies is that children and adolescents with callous–unemotional features respond to prevention or intensive treatment with reduced antisocial behavior. The study that best illustrates this conclusion is the only one that focuses on juveniles with marked psychopathic traits (mean PCL:YV > 30) and histories of violence. Caldwell, Skeem, and colleagues (2006) found that high-psychopathic mid–late adolescents who participated in an intensive custodial treatment program were 2.7 times less likely to reoffend violently during a 2-year period following release, compared with those who participated in custodial treatment as usual (TAU). Compared to TAU, the intensive treatment program involved more services (e.g., 45 programming weeks) and a philosophy more consistent with the RNR model. Specifically, there was less emphasis on sanctions and more emphasis on social skills acquisition, developing conventional social bonds to displace antisocial associations and activities, and eroding antagonistic relationships with authority figures to overcome defiant attitudes. Aggression Replacement Training (a group-based program that focuses on violence reduction) was also applied. The intensive program yielded a benefit–cost ratio of more than 7 to 1 over the TAU group (Caldwell, Vitacco, & Van Rybroek, 2006).

The studies summarized in Table 29.1 also raise one major question: Do callous–unemotional features moderate the effect of branded, “evidence-based” treatment programs for conduct problems on trajectories of antisocial behavior? As yet, the focus must be on programs for conduct disorder because there are no such treatment programs specifically for juvenile psychopathy. With respect to *prevention*, Hyde and colleagues (2013) provide compelling evidence that young children’s callous–unemotional features do not moderate the positive effect of a brief program for conduct problems. But for *treatment* programs, results are mixed.

For example, multisystemic therapy (MST; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998) is an intensive, family-based program explicitly designed to reduce the need for out-of-home placement for high-risk youth. It has multiple components that target a broad range of risk factors (individual, peer, family). MST seems particularly relevant for “psychopathic” youth with pronounced disinhibition (cf. Patrick, Fowles, & Krueger, 2009; Patrick et al., 2013) given that it improves a range of externalizing symptoms (e.g., substance abuse, emotional problems; see Heng-

gler & Sheidow, 2012). In a meta-analysis, Curtis, Ronan, and Borduin (2004) found no significant difference in the effect of MST on outcomes for violent and chronic juvenile offenders ($d = 0.44$) versus lower-risk youth ($d = 0.38$). But how does it fare with “psychopathic” young people?

As shown in Table 29.1, two investigations have assessed juveniles’ psychopathy while testing the effectiveness of MST compared to TAU in a resource-rich environment (i.e., the United Kingdom and The Netherlands). Butler and colleagues (2011) demonstrated that MST reduced parents’ (but not adolescents’) posttreatment ratings of psychopathy and rates of offending over an average 3-year period (see White, Frick, Lawing, & Bauer, 2013, for an uncontrolled but similar demonstration). These findings are consistent with the notion that intensive treatment designed for high-risk—but not necessarily psychopathic—youth can reduce criminal behavior for those with psychopathy. In contrast, Manders and colleagues (2013) found that callous–unemotional traits and narcissism moderated the effect of MST on end-of-treatment externalizing symptoms (i.e., MST had no advantage over usual services for those with pronounced traits). This finding suggests that packaged programs for “vanilla” high-risk youth (i.e., those with multiple risk factors and/or severe conduct disorder, but not necessarily psychopathy) require modification to systematically be responsive to those with callous–unemotional features.

In keeping with the latter notion—that treatment must be tailored to maximize effectiveness—Dadds, Cauchi, and colleagues (2012; see Table 29.1) found that risk reduction for early adolescents with callous–unemotional features was improved when their socioemotional deficits were directly addressed (see also Hawes and Dadds, 2005). Specifically, in a randomized controlled trial that compared a typical parent training intervention with one that added an emotion-recognition component (including parent–child exercises on accurately perceiving/interpreting emotions), Dadds, Cauchi, and colleagues found that youth with callous–unemotional traits showed significantly greater improvement in conduct problems over a 6-month follow-up period in the emotion-recognition condition.

In summary, available evidence indicates that “psychopathic” juveniles are high-risk cases that should be targeted with prevention programs and with intensive, appropriate treatment. It is possible (and, in our view, probable) that treatment will be most effective when specifically targeting callous–

TABLE 29.1. Relatively Large, Well-Controlled Treatment Studies Relevant to Juvenile Psychopathy

Study	Sample	Design/outcome	Treatment condition	Outcome
Butler et al. (2011)	<p><i>Correctional</i>: 108 youthful offenders in the United Kingdom (M = 15 years)</p> <p><i>Measure</i>: APSD, parent and youth reports</p>	<p>Randomly assigned to MST or TAU delivered by youthful offending teams</p> <p><i>Outcome</i>: change in number of offenses over 30 months (including 18 months posttreatment); pre–post treatment change in APSD scores</p>	<p>Correctional treatments</p> <p>MST is an evidence-based, multimodal family intervention (see text for details)</p>	<p>MST was more effective than TAU in reducing offending, and also significantly reduced posttreatment parent (not adolescent) ratings of psychopathic traits.</p>
Caldwell et al. (2006a)	<p><i>Correctional</i>: 141 psychopathic male juvenile offenders (M = 17 years)</p> <p><i>Measure</i>: PCL:YV</p>	<p>Propensity-matched groups in intensive treatment versus TAU</p> <p><i>Outcome</i>: Violent recidivism over 2+-year follow-up.</p>	<p>Correctional treatments</p> <p>Intensive included greater services, less sanction-based philosophy and ART</p>	<p>Youth treated intensively were 2.7 times less likely to violently reoffend than those in TAU</p>
Manders et al. (2013)	<p><i>Clinical/correctional</i>: 256 adolescents with conduct problems referred by social services and the courts to clinics in the Netherlands (M = 16 years)</p> <p><i>Measure</i>: ICU for CU traits; APSD for narcissism and impulsiveness, parent reports</p>	<p>Randomly assigned to MST or TAU</p> <p><i>Outcome</i>: End of treatment ratings of externalizing problems (adolescent- and parent-report); no follow-up period</p>	<p>Correctional treatments</p> <p>MST</p>	<p>CU traits did not predict posttreatment externalizing. However, CU and narcissistic traits moderated the effect of MST on end-of-treatment externalizing symptoms (MST had no advantage over TAU for those with pronounced traits).</p>

Dadds et al. (2012b)	<p><i>Clinical</i>: 191 clinic-referred juveniles with conduct problems (M = 11 years)</p> <p><i>Measure</i>: modified ASPD; multiple informants; top 50% = "high CU"</p>	<p>Randomly assigned to emotion recognition intervention or TAU</p> <p><i>Outcome</i>: improvement in conduct problems over 6-month follow-up</p>	<p>Parenting interventions</p> <p>ERT included parent-child exercises on accurately perceiving/interpreting emotions</p>	<p>Juveniles with CU traits showed significantly greater improvement in conduct problems in the emotion recognition condition than in TAU.</p>
Kolko et al. (2009); Kolko & Pardini (2010)	<p><i>Clinical</i>: 177 children with conduct problems (M = 9 years)</p> <p><i>Measure</i>: APSD, teacher report; many additional measures of conduct problems</p>	<p>Randomly assigned to community- versus clinic-based intensive modular treatment for conduct problems</p> <p><i>Outcome</i>: change in externalizing and psychopathic traits (slope) over 3-year follow-up</p>	<p>Parenting interventions</p> <p>Research clinicians provided modular therapy with the same content in either the community or clinic. Treatment content was tailored to families (and included parent management training, child CBT, medication, etc.)</p>	<p>Community-based treatment was not superior to clinic-based treatment. However, treatment in both contexts significantly reduced psychopathic features (CU, narcissism, and externalizing) and improved functioning and behavior. Moreover, CU traits did not predict posttreatment conduct problems or delinquency.</p>
Hyde et al. (2013)	<p><i>Community</i>: 731 ethnically diverse young children at risk for conduct problems (M = 2.4 years)</p> <p><i>Measure</i>: Deceitful-Callous scale derived from existing scales to approximate the CU scale of the APSD (assessed at age 3); caregiver report</p>	<p>Randomly assigned to no prevention or Family Check-Up (FCU; Dishion et al., 2008), a program initially validated for preventing antisocial behavior among adolescents and adapted here for young children</p> <p><i>Outcome</i>: growth in conduct problems (slope), ages 2-4</p>	<p>Prevention program</p> <p>FCU generally involves three sessions; uses motivational interviewing to increase parents' awareness of problem behavior; focuses on increasing parents skills in addressing problems; program is "personalized"—tailored to individual families</p>	<p>Deceitful-callous traits did not moderate the positive effect of FCU on trajectories of conduct problems (even in the subset of 125 children high in deceitful-callous traits, who were particularly at risk for growth in conduct problems).</p>

Note. ART, aggression replacement training; APSD, Antisocial Process Screening Device; CU, callous-unemotional; CBT, cognitive-behavioral therapy; ERT, emotion recognition training; FCU, Family Check-Up; ICU, Inventory of Callous-Unemotional Traits (see <http://labs.imo.edu/developmental-psychopathology/icu.html>); MST, multisystemic therapy; PCL:YV, Psychopathy Checklist: Youth Version; TAU, treatment as usual.

unemotional features. In fact, some scholars (e.g., Hyde et al., 2013; Kolko et al., 2009) have speculated that the mixed results for the branded programs described earlier are attributable to differences in the extent to which treatment protocols are personalized to address youths' specific risk factors and needs (implicitly including callous–unemotional features): Approaches that are modular and flexible may be more effective for juveniles with callous–unemotional features than interventions that are fixed and focused on general factors such as disinhibition.

Future Directions

Juveniles

Mechanisms

As suggested by the previously noted absence of specialized treatment programs, a rarely realized justification for assessing juvenile psychopathy is to identify high-risk youth who need targeted treatment. The problem of service access, however, may not be limited to those with psychopathy. Even in Arizona, a rehabilitation-oriented state, almost half (43%) of 57 juvenile programs failed differentially to focus service provision on youth classified as high-risk (Redpath & Brander, 2010; see also Lipsey et al., 2010): that is, those who, according to the risk principle described earlier in the section on adults, are most likely to benefit from intensive services.

Given how rarely such services are applied, expanding the number of branded packages for high-risk youth—or creating packages specific for psychopathic youth—seems unlikely to reduce crime on a large scale (National Research Council, 2013). Instead, more may be gained by further articulating general principles about how and when to intervene as a response to criminal conduct, in order to activate specific mechanisms of change. Current models (e.g., RNR) have defined general principles of how to intervene (e.g., with structured, well-implemented, high-dosage treatment that targets risk factors), and with whom (high-risk youth). But little is known about what specific mechanisms of change to target and when to intervene to maximize impact (see Kazdin, 2007).

Callous–unemotional features appear to be particularly relevant targets for risk reduction efforts, but few systematic efforts have focused on how they can be changed (see Salekin, Tippet, & Allen, 2012, for a remarkable exception). Some el-

ements of traditional cognitive-behavioral therapy (CBT) are theoretically relevant, such as those designed to increase perspective taking (i.e., increase empathy and guilt), and to effect behavior change through reliance on rewards rather than punishment (given punishment insensitivity; see Hawes & Dadds, 2005; Matthys, Vanderschuren, Schutter, & Lochman, 2012). But treatment innovation efforts may also benefit from findings of recent neuroscience-informed research. For example, Dadds and colleagues (2006) demonstrated that observed deficits in recognition of fearful facial expressions were reversed for children with callous–unemotional traits when they were told to “pay attention to the eyes.” This finding suggests that recognition of others' distress can potentially be remedied using a basic behavioral manipulation. Similarly, Han, Alders, Greening, Neufeld, and Mitchell (2012) found that individuals with high callous–unemotional traits demonstrated less amygdala and medial prefrontal cortex activity than those lower in such traits when the eyes in facial pictures of fear were covered, but not when the eyes were isolated. The implication is that attention may be a malleable “empathy arousal mechanism” that can be altered to increase prosocial behavior. As such mechanisms become better understood, they can be embedded in principles for effective treatment that can be personalized to high-risk youth.

Timing

Is there a developmental window of maximum opportunity for behavior change with high-risk youth? Although it is commonly presumed that “the earliest possible intervention is best,” this assumption rests on the unsupported notion that children with severe conduct problems are a qualitatively distinct group that will continue offending into adulthood (see Skeem et al., 2014). The central question of when the greatest gains can be made with the subset of children exhibiting early-onset conduct problems that persist into adolescence (Odgers et al., 2007) remains to be addressed: Surprisingly few studies have examined whether (early) adolescence is an opportunity for maximal behavior change among offenders, and those that exist have done so with little precision. For example, in his meta-analysis of studies of youth between ages of 12 and 21, Lipsey (2009) found that the average age of juveniles did not significantly moderate the effect of treatment on recidivism. Age, however, is a poor marker of

developmental maturity. Moreover, treatment programs vary in the extent to which they target social-affective processes that are often impaired among high-risk youth, and have been shown to be uniquely responsive to learning during adolescence (see Skeem et al., 2014).

Future research should directly evaluate whether intervening during (early) adolescence maximizes behavior change for the small subgroup of high-risk children whose early conduct disorder does not abate at puberty. As summarized by Crone and Dahl (2012), recent neurobehavioral research indicates that the onset of puberty marks the beginning of dramatic changes in reward processing, processing of emotional stimuli, and social-cognitive reasoning. Biological changes during this period sensitize youth to their social world and create tendencies to explore and engage. Although these tendencies confer vulnerability to risk-taking behavior (including crime), they also appear to offer adaptive advantages—in particular, increased capacity for social and affective learning relative to adults, including learning about trust, empathy, and more automatic patterns of behavioral response to specific emotional and social cues. Thus, for psychopathic youth, the transition to adolescence could provide a natural inflection point for promoting prosocial motivation and goals (rather than deepening already-antisocial ones). If so, policy could be shaped toward intervening during this period to yield large-scale effects on crime reduction.

Adults

Our review of the literature on treatment with adult offenders leads us to conclude that findings from the body of relevant well-controlled studies are encouraging but not yet compelling; there is an urgent need for replication and systematic extension of existing work if the fragile momentum in this important domain is to be maintained. A factor that may account substantially for the current imbalance in treatment development and research in favor of young people is the common assumption that youth interventions are likely to have greater impact than those with adults. However, Lösel (2010) has suggested that this assumption is not necessarily true, arguing that interventions for high-risk (including psychopathic) individuals are likely to be of value at any age.

Compared to the issues that remain unresolved in the literature on treatment of juveniles, the questions that need to be addressed in regard to

treating adults with psychopathy are even more elemental. There is simply a serious dearth of well-controlled outcome studies that address the following questions:

1. Can individuals with psychopathy benefit to the same degree as other offenders from traditional treatment programs for high-risk offenders?
2. Do particular features of psychopathy moderate treatment effects—and if so, which ones?
3. Do treatments designed to reduce antisocial behavior in offenders—which do not overtly target symptoms such as shallowness, grandiosity, or callousness—have an effect on core psychopathic traits?

To address these questions, systematic treatment-outcome studies that assess psychopathic tendencies and match treated and comparison groups on “Factor 1” features of psychopathy, as well as criminal risk, need to be undertaken.

Some key challenges confront efforts to conduct research on processes relevant to treatment-related change in high-risk adult offenders. One is simply the question of how best to measure changes over the course of treatment. Although callous-unemotional traits have been repeatedly assessed in treatment studies of juveniles, only variable risk factors for recidivism have been measured in studies of their adult counterparts. In no small part, this is because few psychopathy measures are designed to be sensitive to change, and research on change using measures of this type is scant to nonexistent. As such, there is a critical need for research on change as indexed by reliable, valid, and clinically feasible methods for ongoing monitoring of treatment progress, including measures of change in core psychopathic traits. Ideally, assessments of change would include observer report-based measures (e.g., therapist-, or researcher-rated), as well as offender self-report indices.

Once more studies exist that address these fundamental questions, additional systematic investigations will be needed to advance understanding of mechanisms of change. The adult literature on mechanisms of change with offenders in general is sparse—more specifically, there is a need for investigations into *which* variable risk factors among those routinely assessed in clinical practice actually function as causal influences on psychopathic tendencies and propensity for offending (for discussion, see Kroner & Yessine, 2013; Mann et al., 2010; Monahan & Skeem, 2014). Future research

on treatment design, process, and outcome should also investigate whether change processes are equivalent for variants of psychopathy. A particularly intriguing question in this regard pertains to the role that anxiety plays in recidivism for those with secondary psychopathy, and how this role should be addressed in treatment interventions.

Of further note, there is an older body of published studies—not reviewed here—on the treatment of psychopathy in adults. Harkening back to a time when individuals with psychopathy were treated using mainly unstructured psychotherapies, with little expectation of effectiveness, most of these studies were uncontrolled and otherwise methodologically inadequate; therefore, little can be concluded from them (Salekin, 2002). However, a notable feature of these studies that is lacking in the existing adult literature, but evident in contemporary youth studies, is their focus on outcomes other than criminal recidivism. Broadening the range of measured outcomes in future treatment research with adults would be particularly helpful for addressing crucial questions:

- Does treatment just reduce criminal behavior, or does it actually lead to broader reductions in socially and personally harmful behavior?
- Does it improve other desistance outcomes and increase prosocial behavior (e.g., participation in employment, more responsible parenting, decreased alcohol and drug use)?
- Does it set up conditions that may help with community reintegration?

Answering these questions would also indirectly inform understanding of change mechanisms.

Beyond these suggestions, what is the relevance of the new triarchic model of psychopathy (Patrick, Preface and Chapter 1, this volume; Patrick et al., 2009) for treatment? We know of no treatment research yet based on this model. However, Patrick, Drislane, and Strickland (2012) have provided interesting suggestions for neurobiologically informed intervention strategies (e.g., attentional retraining; cf. Baskin-Sommers et al., 2015) for addressing features of psychopathy, which we hope will stimulate investigation.

It may turn out that more evolved intervention programs for adults and younger individuals with psychopathy do not show incremental effectiveness over existing approaches to reducing impulsive–antisocial behavior (e.g., high-risk offender treatments). But treating psychopathy itself may

be important for other reasons, including the potential of effective treatment to (1) restore faith among members of the public that psychopathic individuals are not intractable threats who must be indefinitely detained, and (2) assist the criminal and juvenile justice systems to meet their obligation to provide access to rehabilitation for all adjudicated individuals in need of it. As a whole, the state of current knowledge reviewed here encourages optimism regarding our ability to effect positive change in individuals with psychopathy—justifying ongoing scholarly investment in systematic research that investigates the malleability of core psychopathic traits and harmful behaviors that emanate from them.

NOTE

1. Similarly, “sensation seeking”—the tendency to seek novel, intense, and exciting feelings and experiences—is pronounced among psychopathic youth and reaches peak levels during midadolescence (Steinberg, 2009). In a longitudinal study of 7,675 adolescents, Harden, Quinn, and Tucker-Drob (2012) found that (1) youth with high initial levels of sensation seeking manifested fewer increases in sensation seeking during adolescence than those with lower initial levels, but (2) within each youth, increases in sensation seeking significantly predicted increases in antisocial behavior.

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