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Psychopathy Development and Implications for Early Intervention

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This article reviews the fledgling psychopathy development and intervention literatures. We conclude that long-term, intensive, multiple systems interventions, which integrate cognitive-behavioral and motivation-enhancement techniques, provide the greatest promise for youths exhibiting psychopathy features.

Keywords: cognitive-behavioral therapy; motivational interviewing; multiple systems intervention; callous/unemotional traits

Contemporary definitions of psychopathy emphasize both affective/interpersonal features (Factor 1; e.g., superficial charm, lack of interpersonal remorse, egocentrism, poverty of emotion) and pervasive behaviors representative of a disregard for others (Factor 2; e.g., unstable lifestyle, antisocial behavior, lack of impulse control) (e.g., Burke, Loeber, & Lahey, 2007; Hare, Harpur, Hakstian, Forth, & Hart, 1990). The pervasive behaviors of the second factor (disregard for others) are similar to behavioral patterns of antisocial personality disorder (APD) described by the current edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association [APA], 2000). Yet, there is much current debate over the degree to which antisocial behavior is a trait inherent in or a byproduct of psychopathy (Cooke & Michie, 2001; Cooke, Michie, & Skeem, 2007; Hare, 2003; Neumann, Vitacco, Hare, & Wupperman, 2005; Skeem, Mulvey, & Grisso, 2003; Williams, Paulhus, & Hare, 2007).

Personality features unique to psychopathy, such as interpersonal and affective traits, have been linked to frequency, variety, and severity (e.g., violence) of criminal activity (e.g., Hare, Clark, Grann, & Thornton, 2000; Harris, Rice, & Cormier, 1991; Hemphill, Hare, & Wong, 1998; Kotler & McMahon, 2005; Serin & Amos, 1995). Individuals scoring high on psychopathy measures exhibit greater violence (Serin, 1991) and instrumental offending (Cornell et al., 1996) than persons exhibiting APD behaviors. Because Factor 1 (affective/interpersonal) traits are not included in the current diagnostic nosology of APD (APA, 2000), they may be particularly useful in differentiating psychopathy personality features from behaviors also occurring in APD (Hare, Hart, & Harpur, 1991).

Ideally, psychologists would be able to identify individuals with such personality traits and intervene in order to reduce their risk of violence and criminal offending. However, intervention efficacy for adults exhibiting psychopathy personality features is notoriously poor (Cleckley,

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1988; Vaillant, 1975; see for a review Thornton & Blud, 2007). This article will thus focus on the childhood development of psychopathy features and identify those developmental precursors that may be relatively amenable to intervention. Building upon increased focus on youthful manifestations of psychopathy identified in the literature (Burns, 2000; Dadds, Fraser, Frost, & Hawes, 2005; Kotler & McMahon, 2005; Murrie, Boccaccini, McCoy, & Cornell, 2007), this review will conclude with suggestions for future intervention development.

Psychopathy Development

Callous and unemotional (CU) traits in children, akin to Factor 1 (affective/interpersonal) psychopathy features, are negative prognostic indicators. Thus, examination of CU and its correlates may be particularly important to identifying useful points of early intervention. First, children high (versus low) in CU traits show greater persistence in behaviors previously rewarded despite increasing frequency of punishment (Barry et al., 2000). In addition, high-CU children tend to exhibit greater fearlessness (sensation seeking), greater conduct problems despite negative consequences, and less distress about their conduct-related difficulties (Barry et al., 2000). These findings are consistent with Cleckley's (1988) observation that psychopaths lack normative responsiveness to punishment.

Callous/unemotional traits are associated with low anxiety in children (Barry et al., 2000; Frick Bodin, & Barry, 2000; Hipwell, Pardini, Loeber, Sembower, & Keenan, 2007; Kochanska, 1995; Kotler & McMahon, 2005; Young, Fox, & Zahn-Waxler, 1999), and both manifestations appear to have biological substrates. Specifically, CU traits have been linked to low cortisol levels in boys, and low cortisol is a biological marker of low trait anxiety (Loney, Butler, Lima, Counts, & Eckel, 2006). Importantly, parenting style may moderate the effect of juvenile anxiety on CU-trait development; that is, low anxiety predicted higher CU traits at 1-year follow-up only among children reporting *low levels of parental warmth* (i.e., there was no relationship between low anxiety and CU-trait development in conditions of moderate-to-high parental warmth; Pardini, Lochman, & Powell, 2007). Thus, parental warmth may play a role in protecting low-anxiety children from CU-trait development.

Dadds and Salmon (2003) suggested that punishment insensitivity, common in individuals high in psychopathy traits, may be learned through inappropriate discipline such as mixing punishers and rewards, punishing avoidant responses, gradual escalation of punishment, and punishment for reasons other than children's behavior. These authors also stress that, consistent with Gray's (1990) theory of motivational systems, development of punishment insensitivity is most likely due to a combination of environmental and trait factors. Gray (1990) proposed that two motivation systems, the behavioral inhibition system (BIS) and the behavioral activation system (BAS), are the bases of affect and behavior. The BIS is responsive to punishment, instances in which behavior is not rewarded, and also initiates negative feelings such as anxiety. Whereas the BAS is sensitive to reward, instances in which behavior is not punished, and escape from punishment, punishment insensitivity appears to be associated with lower BIS. According to Dadds and Salmon (2003), "individuals with low BIS may fail to learn to inhibit behavior in the presence of punishment cues, making them difficult to socialize through punishment mechanisms" (pp. 72–73). These results suggest that low BIS may be a feature of psychopathy.

Significant stressors such as harsh parenting in early childhood also may play a part in children's development of CU traits (Frick, Kimonis, Dandreaux, & Farell, 2003). Supporting this claim, higher parent-reported levels of corporal punishment predict CU traits and antisocial behavior at 1-year follow-up (Pardini et al., 2007). In addition, childhood abuse has been shown to predict psychopathy, with psychopathy mediating a relationship between childhood victimization and adult violence (Weiler & Widom, 1996). Integrating these findings, it appears that

low-anxiety children who experience low parental warmth, low supportiveness, and high indiscriminant and harsh punishment may be particularly vulnerable to developing CU traits.

Implications for Early Intervention: A Components Perspective

Cleckley (1988) conceptualized psychopathy as essentially untreatable, a pessimistic view that has been challenged (e.g., Thornton & Blud, 2007). Indeed, a meta-analysis of interventions with psychopathic persons found that 62% improved with cognitive-behavioral therapy (CBT) and that improvement in this group was augmented by integrating insight-oriented modalities (Salekin, 2002). Moreover, particularly strong improvement rates have been observed among juveniles (as compared to adults), with interventions incorporating family members (as compared to those not incorporating family members), and with intensive interventions averaging four sessions per week for at least 1 year (as compared to short-term interventions; Salekin, 2002). Positive study outcomes included reduction in both psychopathy features and recidivism (Salekin, 2002). These data together highlight the promise of early, sustained CBT interventions that involve families in treatment. Underscoring the importance of sustained CBT for juvenile offenders in particular, a study of outpatient sex offenders high in psychopathy features found that violent recidivism among program completers was 30%, versus 80% for non-completers (Gretton, McBride, Hare, O'Shaughnessy, & Kumka, 2001; see also O'Neill, Lidz, & Heilbrun, 2003).

Despite the promise of early CBT intervention for persons developing psychopathic traits, intervention research for juveniles with psychopathy features rarely has included comparison groups, which makes specific conclusions untenable (cf. Caldwell, Skeem, Salekin, & Van Rybroek, 2006; Caldwell & Van Rybroek, 2001). Of course, the efficacy of any intervention ultimately should be tested using randomized controlled trials (RCTs), with prospective, longitudinal designs that follow individuals' responses to intervention over time. In addition to generally encouraging such future research, we propose, based upon the developmental and treatment data currently available, integration of two treatment modalities with CBT for juveniles with psychopathy features. First, owing to data suggesting that early and intensive engagement in intervention predicts relatively favorable treatment outcomes (Salekin, 2002), we propose integration of motivation-enhancing techniques to combat the relatively high resistance to treatment in this population. Next, consistent with research suggesting that low-anxiety children may be protected from CU-trait development by parental warmth (Pardini et al., 2007), we propose interventions that train parents to have warm, supportive relationships with their adolescents and to employ discipline strategies using primarily reinforcement-based principles (e.g., Kazdin, 2008).

Enhancing Treatment Motivation in the Treatment Averse

As discussed, treatment resistance may be at its greatest level in individuals displaying emerging psychopathy traits (Thornton & Blud, 2007). Further, intrinsic motivation, the key to sustainable therapeutic change, is notoriously poor in forensic populations (Ginsburg, Mann, Rotgers, & Weekes, 2002). Motivation in these populations is hampered not only by internal (personality) factors but also by external factors, including court-mandate (i.e., implicit coercion) and restricted treatment choice, which cumulatively may exacerbate treatment resistance (Ginsburg et al., 2002). Ginsburg and colleagues (2002) posited that, via the development of a supportive therapeutic relationship, a context is created in which motivation toward self-exploration, change, and talking about change at least may be contemplated. They emphasized, "badgering a client to change his or her perspective does little to encourage behavior change, whereas respecting the client always leaves the possibility of movement toward change" (p. 338).

Motivational interviewing is a prime example of a treatment developed specifically to address clients' motivation to change, and the ambivalence that surrounds change in all individuals.

According to the treatment developers, "motivational interviewing is a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence" (Rollnick & Miller, 1995). Originally designed to treat problem drinking, MI has been shown in numerous controlled trials to produce significant change in a wide variety of health behaviors (Hettema, Steele, & Miller, 2005). MI has been effective in reducing substance use with both adults and adolescents (Colby et al., 1998; Dennis et al., 2004; Monti, Barnett, O'Leary, & Colby, 2001; Monti et al., 1999). A recent meta-analysis suggested that the effect size associated with MI for adolescent alcohol use is roughly equivalent to that found with adults, and that the effect size associated with multiple substance use was even more promising ($d = .78$, a medium-large effect; Tait & Hulse, 2003). MI has been delivered across a diverse range of settings including universities, schools, community-based substance abuse treatment centers, and probation departments (Sinha, Easton, & Kemp, 2003; Tait & Hulse, 2003).

Despite the promise of MI with adolescent populations, evidence of enhanced motivation or reduced antagonistic interpersonal bonds among juveniles with psychopathy features in particular is limited. One notable exception is Caldwell and Van Rybroek's (2001) decompression treatment, which focuses on maximizing juveniles' frequent, brief individual contacts with service personnel, during which juveniles choose from cooperative activities (e.g., informal conversation, board game, reading activity), and diminishing control-based interactions. A 2-year follow-up of this treatment demonstrated that juveniles high in psychopathy features were 2.7 times less likely to violently recidivate if treated from a decompression model relative to treatment as usual (Caldwell et al., 2006). These findings are promising; yet, as the authors emphasized, the treatment factors responsible for these effects are yet to be identified (Caldwell et al., 2006).

We propose that motivation-augmenting approaches, such as MI, could be incorporated into interventions designed to treat juveniles with psychopathy features. Ginsburg and colleagues (2002) previously have suggested that MI approaches could be transported to the treatment of criminal justice populations, noting in particular MI's brevity, cost effectiveness, accessibility to a variety of professionals, and ease of integration with treatment modalities such as CBT (see also Westra, 2004). These authors answer a pragmatic question, *what might it take to keep offenders engaged in treatment programs*, by suggesting use of basic MI principles such as "eliciting the client's concerns, reflecting ambivalence, and allowing the client to develop a plan for change that best suits him or her" (Ginsburg et al., 2002, p. 335). Much could be gained by reflecting upon and extending their analysis to juveniles with psychopathic features. Such interventions might feature, for example, empathizing with these youths' perspectives on their problems, refraining from labeling their behavior using shame-inducing terms, and engaging with them to resolve discrepancies among their past behaviors, present treatment, and future life goals. Any or all of these processes might reduce resistance, enhance implicit motivation, and increase the likelihood of self-serving treatment engagement and persistence.

Readers may react with skepticism toward "rolling with resistance" with juveniles showing psychopathy features. How then might interventionists manage this skepticism when engaging in such an endeavor? Westra (2004) suggested reconceptualizing ambivalence as a normal part of the change process. Consider how clients with psychopathy features might react if, rather than challenging their resistance, clinicians responded according to MI principles of empathy, reflection, and allegiance in support of self-efficacy (Miller & Rollnick, 2002). The initial session focus may reflect the "battle" in the client's mind about treatment and change (Westra, 2004). Perhaps a portion of juvenile clients would feel they had successfully "tamed the dragon" and would head for the door, but no data to our knowledge demonstrates that even psychopaths with anti-change agendas are absolutely devoid of change thought or inclination toward change (even if it is not verbalized). Further, functional thoughts about treatment may be comparatively greater among juveniles, who have not solidified many developmental issues such as personality features and ingrained behavior patterns (Caldwell et al., 2006; Salekin, 2002; Thornton & Blud, 2007) and

who may not have as extensive a treatment history. Overall, providing a therapeutic context that allows juveniles to contemplate their change motivation may be a cracked door through which the therapeutic alliance may develop.

Integrating Motivational and Cognitive-Behavioral Strategies Into a Multiple Systems Intervention for Youth With Psychopathy Features

Multiple systems treatments are based upon the theory that delinquent behaviors are maintained by the social systems, or ecologies, juveniles occupy (Bronfenbrenner, 1979; Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998). Specifically, delinquent behavior is associated with delinquent peer affiliation, maladaptive parenting practices, and indirectly with neighborhood social environment and parenting influences on peer affiliation (Huey & Henggeler, 2001). In particular, as previously reviewed, children may be protected from CU trait development by parental warmth and supportiveness rather than harsh, authoritarian parenting (Pardini et al., 2007). Two widely researched variants of multiple systems treatment are Multisystemic Therapy (MST; Huey & Henggeler, 2001; Sheidow & Henggeler, 2005) and Functional Family Therapy (FFT; Alexander et al., 1998; Sexton & Alexander, 2005; see also Multidimensional Family Therapy; Liddle, 2002; and Brief Strategic Family Therapy; Szapocznik, Hervis, & Schwartz, 2003).

Multiple systems treatments exert change on juveniles' social ecologies by directly intervening in multiple systems that have an influence on youth behavior, including the family, school, community, juvenile justice system, and so forth. They are designed to apply a variety of treatment techniques to these contexts. For example, cognitive-behavioral strategies such as reframing youths' behavior in a more functional light, improving communication between parents and adolescents, and jointly constructing behavior plans between parents and adolescents may be integrated into a multiple systems framework (Alexander & Barton, 1995; Alexander & Parsons, 1973; Huey & Henggeler, 2001). These treatments utilize existing competencies to build skills and reinforce small incremental changes (Huey & Henggeler, 2001) and take place via an intensive (sometimes daily) yet brief schedule, lasting 3 to 6 months (Sheidow & Henggeler, 2005). As discussed, intensive treatment schedules are conducive to positive outcomes with juveniles exhibiting psychopathy features (Salekin, 2002). They have been shown to affect higher retention rates as compared to usual community services (Henggeler, Pickrel, Brondino, & Crouch, 1996) and hospitalization (Schoenwald, Ward, Henggeler, & Rowland, 2000).

Specific treatment foci of multiple systems interventions include improving parents' skills in effectively communicating, monitoring, and disciplining their children, promoting youths' prosocial activities, and facilitating positive activities between youth and their parents (Huey & Henggeler, 2001). One key component to change is ensuring the family, both juveniles and parents, is fully engaged in the treatment process (Huey & Henggeler, 2001). This involves establishing and maintaining multiple alliances with each family member (Robbins, Turner, Alexander, & Perez, 2003). If the family is not engaged, efforts to influence the family in taking steps toward meeting their treatment goals may actually have a detrimental effect on treatment outcomes (Huey, Henggeler, Brondino, & Pickrel, 2000). It is at the early stage of treatment that motivational interviewing principles of collaboration, reflection, support of the juveniles' self-efficacy (Miller & Rollnick, 2002), and reframing ambivalence as normative (Westra, 2004) would be key to eliciting adolescents' engagement (Ginsburg et al., 2002). Such principles also would be beneficial in working with juveniles' families, who may themselves feel ambivalent given the treatment context in which they find themselves. Multiple systems treatment developers have stressed that treatment should involve collaboration between the therapist and the family (Alexander & Barton, 1995; Huey & Henggeler, 2001; Huey et al., 2000). The therapist should remain open and warm to the family, remain sensitive to the family's beliefs and practices (including attempting

not to force change or place blame), promote equality of communication among family members, and advocate for the family (Alexander & Barton, 1995; Huey & Henggeler, 2001).

Fostering effective communication in an engaged family allows the family to build strengths and support (Alexander & Parsons, 1973; Huey et al., 2000). Both MST (Huey & Henggeler, 2001) and FFT (Alexander & Parsons, 1973) developers recommended using positive reinforcement as families progress toward treatment goals. The therapist should model and systematically reinforce appropriate communication by structuring discussion and clearly stating the purposes of communication (Alexander & Parsons, 1973; Alexander & Barton, 1995). Treatment developers also suggest making a clear distinction between rules, or limits, to family behavior, and requests, which do not limit responses (Alexander & Parsons, 1973).

Another aspect of enhancing collaboration among family members is encouraging and reinforcing involvement in shared, mutually desirable activities for the juvenile and his or her caregivers (Huey & Henggeler, 2001; Huey et al., 2000). Increased family cohesion, among other MST goals, predicted not only lowered association among juveniles with delinquent peers but also decreased delinquent behaviors (Huey et al., 2000). Supportive relationships between adolescents and their parents predicted greater improvement in families completing MST than in adolescents completing individual therapy (Mann, Borduin, Henggeler, & Blaske, 1990). In addition, communication and lower conflict-hostility predicted greater improvement among parents completing MST, and negative cross-generational coalitions between mothers and adolescents were relatively reduced among families completing MST (Mann et al., 1990).

MST has been compared to outcomes with usual court-mandated diversionary services for juveniles (i.e., those in lieu of detention time). As compared to services as usual, juveniles completing MST exhibit improved self-reported and observed family relations, decreased problem behaviors, and decreased association with delinquent peers (Henggeler et al., 1986). In addition, recidivism rates were 43% lower for those juveniles completing MST at 1.1-year follow-up (Henggeler, Melton, & Smith, 1992), 50% lower at 2.4-year follow-up (Henggeler, Melton, Smith, Schoenwald, & Hanley, 1993), and 69% lower at 4-year follow-up (Borduin et al., 1995). Also, FFT, similar in focus to MST, is efficacious in reducing recidivism rates in juveniles as compared to those who completed no treatment, client-centered treatment, or psychodynamic treatment (Alexander & Parsons, 1973; Gordon, Arbuthnot, Gustafson, & McGreen, 1988). Despite these promising findings, multiple systems treatments are yet to be transported specifically to the treatment of juveniles with psychopathy features.

Conclusions and Recommendations for Future Intervention Development

Extant research is yet to establish a "gold-standard" approach to intervening with individuals high in psychopathy (e.g., Salekin, 2002). Yet, cognitive-behavioral therapy (CBT) appears to be a promising intervention for reducing recidivism in psychopathic adults and in juveniles exhibiting psychopathy features (Caldwell & Van Rybroek, 2001; Thornton & Blud, 2007).

One suggested direction for future research is to incorporate components suggested by the developmental and treatment literatures to address etiological concerns into comprehensive intervention programs for youth exhibiting psychopathy features. Multiple systems treatments appear to be a promising method of utilizing CBT techniques to address not only juveniles' delinquent behaviors but also the context that supports and maintains these behaviors (Huey & Henggeler, 2001). This treatment modality is specifically designed to promote skill building within an intensive format so that families may continue to support positive changes (Huey & Henggeler, 2001; Sheidow & Henggeler, 2005). Motivational interviewing principles may be useful in improving and maintaining clients' intrinsic motivations to change, an intervention component that would specifically

address resistance to treatment observed in many individuals with psychopathy traits (Thornton & Blud, 2007) and a factor viewed as necessary for therapeutic benefit (Ginsburg et al., 2002).

Another suggested direction for future research is dismantling studies that deconstruct interventions into specific techniques and analyze the relative efficacy of these in treating juveniles with psychopathy features. There is little extant empirical data substantiating techniques that work with psychopathic individuals; thus, it would be premature to assume without future research that reviewed techniques will prove efficacious. However, extant data demonstrating intervention efficacy with similar problems/populations, such as CBT's effectiveness in treating adolescent sex offenders and substance abusers with psychopathy features (Gretton et al., 2001; O'Neill et al., 2003) and MI's effectiveness with adolescent populations (Tait & Hulse, 2003), provide a basis for testing these strategies in future intervention studies for youth with psychopathy features.

The central conclusion of this review is that multiple systems interventions, including cognitive-behavioral components, hold promise for intervening with youth with emerging psychopathy features (Salekin, 2002). Addressing specifically the resistance associated with psychopathy, a motivational-enhancement component may also be important. Creative interventions that address the broad array of psychopathy features detectable during childhood, including callous/unemotional traits, are in their infancy. Future research should investigate the efficacy of new interventions and work towards developing comprehensive treatment programs for youth exhibiting psychopathy features.

References

Alexander, J., & Barton, C. (1995). Family therapy research. In R. H. Mikesell, D. D. Lusterman, & S. H. McDaniel (Eds.), *Integrating family therapy: Handbook of family psychology and systems theory* (pp. 199–215). Washington, DC: American Psychiatric Association.

Alexander, J., Barton, C., Gordon, D., Grotpeter, J., Hansson, K., Harrison, R., et al. (1998). *Functional family therapy: Book 3, blueprints for violence prevention.* Boulder, CO: Center for the Study and Prevention of Violence.

Alexander, J. F., & Parsons, B. V. (1973). Short-term behavioral intervention with delinquent families: Impact on family process and recidivism. *Journal of Abnormal Psychology, 81,* 219–225.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Barry, C., Frick, P., DeShazo, T., McCoy, M., Ellis, M., & Loney, B. (2000). The importance of callous-unemotional traits for extending the concept of psychopathy to children. *Journal of Abnormal Psychology*, *109*, 335–340.

Borduin, C. M., Mann, B. J., Cone, L. T., Henggeler, S. W., Fucci, B. R., Blaske, D. M., et al. (1995). Multisystemic treatment of serious juvenile offenders: Long-term prevention of criminality and violence. *Journal of Consulting and Clinical Psychology, 63,* 569–578.

Bronfenbrenner, U. (1979). *The ecology of human development.* Cambridge, MA: Harvard University Press.

Burke, J. D., Loeber, R., & Lahey, B. B. (2007). Adolescent conduct disorder and interpersonal callousness as predictors of psychopathy in young adults. *Journal of Clinical Child and Adolescent Psychology*, *36*, 334–346.

Burns, G. (2000). Problem of item overlap between the Psychopathy Screening Device and attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder rating scales. *Psychological Assessment*, *12*, 447–450.

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*, 571–596.

Caldwell, M., & Van Rybroek, G. (2001). Efficacy of a decompression treatment model in the clinical management of violent juvenile offenders. *International Journal of Offender Therapy and Comparative Criminology*, *45*, 469–477.

Cleckley, H. (1988). *The mask of sanity* (5th ed.). Augusta, GA: E. S. Cleckley.

Colby, S. M., Monti, P. M., Barnett, N. P., Rohsehow, D. J., Weissman, K., Spirito, A., et al. (1998). Brief motivational interviewing in a hospital setting for adolescent smoking: A preliminary study. *Journal of Consulting and Clinical Psychology, 66,* 574–578.

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

Cooke, D. J., Michie, C., & Skeem, J. (2007). Understanding the structure of the Psychopathy Checklist-Revised. *British Journal of Psychiatry*, *190*, 39–50.

Cornell, D., Warren, J., Hawk, G., Stafford, E., Oram, G., & Pine, D. (1996). Psychopathy in instrumental and reactive violent offenders. *Journal of Consulting and Clinical Psychology*, *64*, 783–790.

Dadds, M., Fraser, J., Frost, A., & Hawes, D. (2005). Disentangling the underlying dimensions of psychopathy and conduct problems in childhood: A community study. *Journal of Consulting and Clinical Psychology*, *73*, 400–410.

Dadds, M., & Salmon, K. (2003). Punishment insensitivity and parenting: Temperament and learning as interacting risks for antisocial behavior. *Clinical Child and Family Psychology Review*, *6*, 69–86.

Dennis, M., Godley, S. H., Diamond, G., Tims, F. M., Babor, T., Donaldson, J., et al. (2004). The Cannabis Youth Treatment Study: Main findings from two randomized trials. *Journal of Substance Abuse Treatment, 27,* 197–213.

Frick, P., Bodin, S., & Barry, C. (2000). Psychopathic traits and conduct problems in community and clinic-referred samples of children: Further development of the Psychopathy Screening Device. *Psychological Assessment*, *12*, 382–393.

Frick, P. J., Kimonis, E. R., Dandreaux, D. M., & Farell, J. M. (2003). The four-year stability of psychopathic traits in non-referred youth. *Behavioral Sciences & the Law*, *21*, 713–736.

Ginsburg, J. I. D., Mann, R. E., Rotgers, F., & Weekes, J. R. (2002). Motivational interviewing with criminal justice populations. In W. R. Miller & S. Rollnick (Eds.), *Motivational interviewing: Preparing people for change* (pp. 333–346). New York: Guilford.

Gordon, D. A., Arbuthnot, J., Gustafson, K. E., & McGreen, P. (1988). Home-based behavioral-systems family therapy with disadvantaged juvenile delinquents. *American Journal of Family Therapy, 3,* 243–255.

Gray, J. (1990). Brain systems that mediate both emotion and cognition. *Cognition & Emotion*, *4*, 269–288.

Gretton, H. M., McBride, M., Hare, R. D., O'Shaughnessy, R., & Kumka, G. (2001). Psychopathy and recidivism in adolescent sex behaviors. *Criminal Justice and Behavior*, *28*, 427–449.

Hare, R. D. (2003). *The Hare Psychopathy Checklist-Revised* (2nd ed.). Toronto, ON, Canada: Multi-Health Systems.

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*, 623–645.

Hare, R. D., Harpur, T. J., Hakstian, A. R., Forth, A. E., & Hart, S. D. (1990). The Revised Psychopathy Checklist: Reliability and factor structure. *Psychological Assessment*, *2*, 338–341.

Hare, R. D., Hart, S. D., & Harpur, T. J. (1991). Psychopathy and the DSM-IV criteria for antisocial personality disorder. *Journal of Abnormal Psychology*, *100*, 391–398.

Harris, G., Rice, M., & Cormier, C. (1991). Psychopathy and violent recidivism. *Law and Human Behavior*, *15*, 625–637.

Hemphill, J., Hare, R., & Wong, S. (1998). Psychopathy and recidivism: A review. *Legal and Criminological Psychology*, *3*, 139–170.

Henggeler, S. W., Melton, G. B., & Smith, L. A. (1992). Family preservation using multisystemic therapy: An effective alternative to incarcerating serious juvenile offenders. *Journal of Consulting and Clinical Psychology, 60,* 953–961.

Henggeler, S. W., Melton, G. B., Smith, L. A., Schoenwald, S. K., & Hanley, J. H. (1993). Family preservation using multisystemic treatment: Long-term follow-up to a clinical trial with serious juvenile offenders. *Journal of Child and Family Studies, 2,* 283–293.

Henggeler, S. W., Pickrel, S. G., Brondino, M. J., & Crouch, J. L. (1996). Eliminating (almost) treatment dropout of substance abusing or dependent delinquents through home-based multisystemic therapy. *American Journal of Psychiatry, 153,* 427–428.

Henggeler, S. W., Rodick, J. D., Borduin, C. M., Hanson, C. L., Watson, S. M., & Urey, J. R. (1986). Multisystemic treatment of juvenile offenders: Effects on adolescent behavior and family interaction. *Developmental Psychology, 1,* 132–141.

Henggeler, S. W., Schoenwald, S. K., Borduin, C. M., Rowland, M. D., & Cunningham, P. B. (1998). *Multisystemic treatment of antisocial behavior in children and adolescents.* New York: Guilford.

Hettema, J., Steele, J., & Miller, W. R. (2005). Motivational interviewing. *Annual Review of Clinical Psychology, 1,* 91–111.

Hipwell, A. E., Pardini, D. A., Loeber, R., Sembower, M., & Keenan, K. (2007). Callous-unemotional behaviors in young girls: Shared and unique effects relative to conduct problems. *Journal of Clinical Child and Adolescent Psychology, 36,* 293–304.

Huey, S. J., & Henggeler, S. W. (2001). Effective community-based interventions for antisocial and delinquent adolescents. In J. N. Hughes, A. M. La Greca, & J. C. Conoley (Eds.), *Handbook of psychological services for children and adolescents* (pp. 301–322). Oxford, UK: Oxford University Press.

Huey, S. J., Henggeler, S. W., Brondino, M. J., & Pickrel, S. G. (2000). Mechanisms of change in multisystemic therapy: Reducing delinquent behavior through therapist adherence and improved family and peer functioning. *Journal of Consulting and Clinical Psychology, 68,* 451–467.

Kazdin, A. E. (2008). *The Kazdin Method for parenting the defiant child with no pills, no therapy, no contest of wills.* New York: Houghton Mifflin.

Kochanska, G. (1995). Children's temperament, mothers' discipline, and security of attachment: Multiple pathways to emerging internalization. *Child Development, 66,* 597–615.

Kotler, J. S., & McMahon, R. J. (2005). Child psychopathy: Theories, measurement, and relations with the development and persistence of conduct problems. *Clinical Child and Family Psychology Review, 8,* 291–325.

Liddle, H. A. (2002). *Multidimensional family therapy treatment (MDFT) for adolescent cannabis users* (Volume 5 of the Cannabis Youth Treatment (CYT) manual series). Rockville, MD: CSAT/SAMHSA.

Loney, B. R., Butler, M. A., Lima, E. N., Counts, C. A., & Eckel, L. A. (2006). The relation between salivary cortisol, callous-unemotional traits, and conduct problems in an adolescent non-referred sample. *Journal of Child Psychology and Psychiatry, 47,* 30–36.

Mann, B. J., Borduin, C. M., Henggeler, S. W., & Blaske, D. M. (1990). An investigation of systemic conceptualizations of parent-child coalitions and symptom change. *Journal of Consulting and Clinical Psychology, 58,* 336–344.

Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change.* New York: Guilford.

Monti, P. M., Barnett, N. P., O'Leary, T. A., & Colby, S. M. (2001). Motivational enhancement for alcohol-involved adolescents. In P. M. Monti, S. M. Colby, & T. A. O'Leary (Eds.), *Adolescents, alcohol, and substance abuse: Reaching teens through brief interventions* (pp. 145–182). New York: Guilford.

Monti, P. M., Colby, S. M., Barnett, N. P., Spirito, A., Rohsenow, D. J., Myers, M., et al. (1999). Brief intervention for harm reduction with alcohol-positive older adolescents in a hospital emergency department. *Journal of Consulting and Clinical Psychology, 67,* 989–994.

Murrie, D. C., Boccaccini, M. T., McCoy, W., & Cornell, D. G. (2007). Diagnostic labeling in juvenile court: How do descriptions of psychopathy and conduct disorder influence judges? *Journal of Clinical Child & Adolescent Psychology, 36,* 228–241.

Neumann, C. S., Vitacco, M. J., Hare, R. D., & Wupperman, P. (2005). Reconstruing the "reconstruction" of psychopathy: A comment on Cooke, Michie, Hart, & Clark. *Journal of Personality Disorders, 19,* 624–640.

O'Neill, M. L., Lidz, V., & Heilbrun, K. (2003). Adolescents with psychopathic characteristics in a substance abusing cohort: Treatment process and outcomes. *Law and Human Behavior, 27,* 299–313.

Pardini, D. A., Lochman, J. E., & Powell, N. (2007). The development of callous-unemotional traits and antisocial behavior in children: Are there shared and/or unique predictors? *Journal of Clinical Child and Adolescent Psychology*, *36*, 319–333.

Robbins, M. S., Turner, C. W., Alexander, J. F., & Perez, G. P. (2003). Alliance and dropout in family therapy for adolescents with behavior problems: Individual and systemic effects. *Journal of Family Psychology, 17,* 534–544.

Rollnick, S., & Miller, W. R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychotherapy, 23,* 325–334.

Salekin, R. (2002). Psychopathy and therapeutic pessimism: Clinical lore or clinical reality? *Clinical Psychology Review*, *22*, 79–112.

Schoenwald, S. K., Ward, D. M., Henggeler, S. W., & Rowland, M. D. (2000). MST vs. hospitalization for crisis stabilization of youth: Placement outcomes 4 months post-referral. *Mental Health Services Research, 2,* 3–12.

Serin, R. (1991). Psychopathy and violence in criminals. *Journal of Interpersonal Violence*, *6*, 423–431.

Serin, R., & Amos, N. (1995). The role of psychopathy in the assessment of dangerousness. *International Journal of Law and Psychiatry*, *18*, 231–238.

Sexton, T., & Alexander, J. (2005). Functional family therapy for externalizing disorders in adolescents. In J. L. Lebow (Ed.), *Handbook of clinical family therapy* (pp. 164–191). Hoboken, NJ: John Wiley.

Sheidow, A. J., & Henggeler, S. W. (2005). Community-based treatments. In K. Heilbrun, N. E. Sevin Goldstein, & R. E. Redding (Eds.), *Juvenile delinquency: Prevention, assessment, and intervention* (pp. 257–281). New York: Oxford University Press.

Sinha, R., Easton, C., & Kemp, K. (2003). Substance abuse treatment characteristics of probation-referred young adults in a community-based outpatient program. *American Journal of Drug and Alcohol Abuse, 29,* 585–597.

Skeem, J. L., Mulvey, E. P., & Grisso, T. (2003). Applicability of traditional and revised models of psychopathy to the Psychopathy Checklist: Screening Version. *Psychological Assessment*, *15*, 41–55.

Szapocznik, J., Hervis, O., & Schwartz, S. (2003). *Brief strategic family therapy* (NIDA treatment manual series). Rockville, MD: National Institute on Drug Abuse.

Tait, R. J., & Hulse, G. K. (2003). A systematic review of the effectiveness of brief interventions with substance using adolescents by type of drug. *Drug and Alcohol Review, 22,* 337–346.

Thornton, D., & Blud, L. (2007). The influence of psychopathic traits on response to treatment. In H. Hervé & J. C. Yuille (Eds.), *The psychopath: Theory, research, and practice* (pp. 505–539). Mahwah, NJ: Lawrence Erlbaum.

Vaillant, G. (1975). Sociopathy as a human process: A viewpoint. *Archives of General Psychiatry*, *32*, 178–183.

Weiler, B. L., & Widom, C. S. (1996). Psychopathy and violent behavior in abused and neglected young adults. *Criminal Behavior and Mental Health*, *6*, 253–271.

Westra, H. A. (2004). Managing resistance in cognitive behavioral therapy: The application of motivational interviewing in mixed anxiety and depression. *Cognitive Behaviour Therapy*, *33*, 161–175.

Williams, K. M., Paulhus, D. L., & Hare, R. D. (2007). Capturing the four-factor structure of psychopathy in college students via self report. *Journal of Personality Assessment*, *88*, 205–219.

Young, S. K., Fox, N. A., & Zahn-Waxler, C. (1999). The relations between temperament and empathy in 2-year-olds. *Developmental Psychology*, *35*, 1189–1197.

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