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The Importance of Staff Practice in Delivering Effective Correctional Treatment: A Meta-Analytic Review of Core Correctional Practice

Craig Dowden
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Abstract: *Several meta-analyses have rendered strong support for the clinically relevant and psychologically informed principles of human service, risk, need, and general responsiveness. However, each of these reviews has focused on specific program components and not on the characteristics of the staff or the specific techniques used to deliver the program. This meta-analytic review examines the role of core correctional practices in reducing recidivism and provides strong preliminary evidence regarding their effectiveness. Staff characteristics and training in core skills must be addressed to ensure the maximum therapeutic impact of correctional treatment programs.*

Keywords: *correctional practice; meta-analysis; staff practice*

Meta-analytic evidence has suggested that the clinically relevant and psychologically informed principles of risk, need, and general responsiveness are associated with significant reductions in reoffending. The risk principle states that the intensity of the program should be modified to match the risk level of the offender (e.g., higher risk cases receive more intensive treatment exposure), and it has been supported in several recent meta-analytic reviews (Dowden & Andrews, 1999a, 1999b; Lipsey, 1989, 1995).

The need principle, on the other hand, states that in order for rehabilitation programs to be effective in reducing recidivism, they should target the dynamic risk factors of offenders, otherwise known as criminogenic needs¹, (e.g., family and peer associations, antisocial attitudes, anger and impulsivity control, etc.) that have been linked to criminal conduct through previous research (Andrews & Bonta, 1998). Although noncriminogenic needs (e.g., vague emotional personal problems unrelated to criminal conduct, low self-esteem, etc.) may be important, they are not effective in recidivism reduction. Several meta-analyses have provided strong support for this principle, with the results consistently being demonstrated across age, gender, and race (Andrews, Dowden, & Rettinger, 2001; Cleland, Pearson, & Lipton, 1996; Dowden & Andrews, 1999a, 1999b, 2000; Lipsey, 1989, 1995; Losel, 1995).

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The responsivity principle argues that the styles and mode of service used within the correctional rehabilitation program should be matched to the learning style of the offenders. Previous research has demonstrated that cognitive-behavioral and social learning strategies yield the strongest benefits in that regard (Andrews & Bonta, 1998; Andrews, Zinger, et al., 1990), and meta-analytic evidence has consistently supported this notion (Dowden & Andrews, 1999a, 1999b, 2000; Garrett, 1985; Hill, Andrews, & Hoge, 1991; Izzo & Ross, 1990; Lipsey, 1989, 1995; Losel, 1995). Finally, and arguably most important, past meta-analytic research has demonstrated that programs that incorporate all of these principles into their therapeutic framework are associated with the strongest reductions in recidivism, with an average reduction of 26% to 30% (Andrews, Zinger, et al., 1990; Cleland et al., 1996; Dowden & Andrews, 1999a, 1999b, 2000).

Despite these impressive findings regarding what program characteristics are most effective for offenders, very little research has focused on the characteristics of effective staff or the best staff practices to use in the delivery of these interventions. This enhancement of the coding of general responsivity (e.g., the way the program is delivered) may shed more light on the rehabilitation literature in terms of “what works.”

CORE CORRECTIONAL PRACTICE (CCP)

In *Effective Correctional Treatment*, Andrews and Kiessling (1980) introduced the five dimensions of effective correctional practice that were designed to increase the therapeutic potential of rehabilitation programs for offenders. These dimensions were largely based on the social learning theory of criminal behavior and were designed to reflect the most effective and empirically validated intervention strategies for evoking positive behavioral change within offenders. These five dimensions include effective use of authority, anticriminal modeling and reinforcement, problem solving, use of community resources, and quality of interpersonal relationships between staff and client. It should be noted that these dimensions have broad applicability and are relevant to both front-line correctional officers and correctional treatment providers alike. The underlying constructs within these principles have been expanded into a training curriculum titled “Core Correctional Training” (CCT)² (Andrews & Carvell, 1998) and are discussed below.

The first component of CCP is effective use of authority and can be cogently summarized as a “firm but fair” approach to interacting with offenders. More specifically, correctional treatment providers should explicate the formal rules associated within the correctional setting such that they are made more visible, understandable, and unambiguous in application. In addition, treatment providers should seek compliance with these rules through positive reinforcement while avoiding interpersonal domination or abuse.

The second component of CCP involves the treatment providers appropriately modeling and reinforcing anticriminal attitudes and behaviors through directive

positive and/or negative reinforcement. The underlying goal of this approach is that offenders will learn prosocial and anticriminal attitudinal, cognitive, and behavioral patterns from their regular interactions with front-line staff. This component is widely based on the personal, interpersonal, and community-reinforcement (PIC-R) perspective of criminal behavior developed by Andrews (1982). PIC-R argues that the probability of an individual engaging in criminal behavior is a direct function of the patterns of communication or types of behavior patterns that are modeled, rehearsed, and reinforced to the offender. In other words, offenders need to have anticriminal behavior and/or sentiments modeled and appropriately reinforced for correctional treatment to be effective. Staff members who reinforce or do not counteract procriminal sentiments or behaviors seriously undermine the integrity of the rehabilitative efforts and may actually increase criminal recidivism.

The third component of CCP is teaching concrete problem-solving skills to the offender. This involves capitalizing on the knowledge and skills of the treatment provider to engage the offender in resolving the key obstacles that are resulting in reduced levels of satisfaction and rewards for noncriminal pursuits. These problem-solving efforts may be more aptly classified within two spheres of influence, namely, community/interpersonal issues (i.e. work, family, education, peers, financing, and housing) and recreational or personal/emotional problems.

The effective use of community resources is the fourth major component of CCP. This has also been commonly referred to as advocacy/brokerage and is viewed as a special subset of the problem-solving component of CCP. The treatment provider (or probation officer more commonly) should be actively involved in arranging the most appropriate correctional services (i.e., job referrals, medical referrals) for the client. However, it should be noted that the value of these services is contingent upon the degree to which these services are available in the surrounding community.

The fifth and final component of CCP, relationship factors, is also arguably the most important. Essentially, this approach argues that the interpersonal influence exerted by the correctional staff member is maximized under conditions characterized by open, warm, and enthusiastic communication. An equally important consideration is the development of mutual respect and liking between the offender and correctional staff member. This approach asserts that correctional interventions will be most effective when these types of relationships exist within the treatment program.

It should be noted that support for the therapeutic utility of this dimension can be found in the psychotherapy literature, where it has been labeled the ability to foster a therapeutic alliance. In a recent study, Lambert and Barley (2001) found that up to 30% of patient improvement was attributable to these factors, thereby supporting its application in the realm of correctional treatment.

THE NEED FOR A META-ANALYTIC REVIEW

Although these principles have sound theoretical basis and have been supported by some empirical studies (particularly in the area of social learning techniques), a wide-scale examination of these practices has not been conducted. The purpose of this investigation is to conduct a meta-analytic review of the correctional treatment literature to examine whether adherence to these CCPs is associated with enhanced program effectiveness as evidenced by reduced recidivism.

METHOD

Sample of studies. Two sets of studies were utilized for the present meta-analysis. The first set ($k = 154$) of studies was extracted from the Andrews, et al. (1990) meta-analysis, whereas the second set was composed of the additional set of studies reported in Andrews and Bonta (1998, Resource Note 10.1) as well as additional studies identified by Dowden (1998). The complete list of studies used in the present meta-analysis can be found in Dowden.

Although tests of punishment and human service programs were included in the original sample (Dowden, 1998), only the 273 tests of human service were used for the present investigation. Punishment programs were excluded because the primary research question was whether adherence to the principles of CCT significantly enhanced the effectiveness of treatment compared to programs that did not incorporate these techniques into their framework. These techniques, by definition, could not be implemented within punishment-oriented programs. Keeping this aforementioned selection criteria in mind, the procedures adopted in the present meta-analysis for testing the robustness of the elements of CCP should be viewed as relatively conservative.

Measure of effect size. The phi coefficient was the primary effect size measure, because the vast majority of the tests of treatment were derived from 2×2 contingency tables (with two levels of recidivism and two levels of intervention). Multiple effect size estimates were computed if the primary studies allowed separate estimates by case or setting characteristics. Several definitions of recidivism were used, with reconviction being the preferred measure if multiple indices of recidivism were reported.

Interrater reliability. An honours student in psychology was trained in the scoring of these variables, and he was given a preliminary sample of five studies to code. Once these studies were completed, the honours student and the present author discussed any existing discrepancies in scoring. This procedure was used to ensure that the other rater fully understood the underlying constructs present within the coding manuals. Once the other coder felt comfortable with the coding manual, the present author provided a random sample of 29 studies to the addi-

tional coder. These studies were equally drawn from the justice, inappropriate, unspecified, and appropriate service based on the initial codes used by Andrews (Andrews, Zinger, et al., 1990). Equal numbers of studies in each level of type of treatment ensured the other coder had sufficient opportunity to code studies across each level of treatment. These studies were coded blindly and independently by the other rater without any input from the authors.

The measure of interrater reliability was determined by dividing the total number of correct classifications by the total number of coding classifications. The rates of agreement for the variables were 100% for human service ($r = 1.00$), 90% for each of the principles of risk, need, and responsivity ($r = .79$), and ranged from 81% (effective disapproval) to 95% (relationship factors, structured learning, effective modeling, and effective use of authority) for each of the components of CCP.

RISK, NEED, GENERAL RESPONSIVITY, AND APPROPRIATE TREATMENT VARIABLES

The theoretical and clinical relevance of the risk, need, and general responsivity principles of effective correctional treatment (Andrews, 1995; Andrews & Bonta, 1998; Andrews, Bonta, & Hoge, 1990; Andrews, Zinger, et al., 1990) and the procedures for coding them (Dowden & Andrews, 1999a, 1999b, 2000) have been presented in great detail in previous research articles. Therefore, only a brief discussion of the coding procedures used will be discussed below.

Risk. In this meta-analysis, a program was coded as involving higher risk clients if the majority of them had a previous offence history and had formally penetrated the justice system at the time of the study.

Need. A program was coded criminogenic if the majority of needs targeted within it were criminogenic needs.

Responsivity. Programs were coded as appropriately adhering to the general responsivity principle if cognitive-behavioral or social learning techniques were used to deliver the program material.

Appropriate treatment. The impact of appropriate treatment programs (service consistent with the principles of human service, risk, need, and general responsivity) was also considered. The measure of appropriate treatment used in this study was introduced by Andrews et al. (1990) but was objectified by Dowden and Andrews (1999a, 1999b), as they simply counted the number of principles that were adhered to within the human service program (none to three). Although Dowden and Andrews used a four-level variable (with criminal sanctions automatically coded as 0), a dichotomous measure was used for the purposes of this review. More specifically, inappropriate treatment was defined as

programs that adhered to less than two of the principles, whereas programs that adhered to two or three of the principles were classified as appropriate treatment.

CCP. A measure of each of the CCPs outlined by Andrews and Carvell (1998) has been included. However, to maximize variability in the study, these five dimensions were expanded to include subordinate categories. For ease of interpretation, these categories are presented in their order in the introduction. These are presented below, along with their corresponding coding indicators.

1. Effective use of authority
Staff members kept the focus of the message on the behaviour and not the client performing it. In addition, staff were direct and specific concerning their demands, used his or her normal voice, specified the choices with accompanying consequences, gave encouraging messages, supported words with action, used a firm-but-fair approach or respectfully guided the offender toward compliance.
2. Appropriate modeling and reinforcement
 - a. Effective modeling—The program staff used a coping model, demonstrated the behaviour in concrete and vivid ways, rewarded the clients for exhibiting the behaviour, or was generally a source of reinforcement rather than punishment for the offender.
 - b. Effective reinforcement—The client was immediately told why the staff member approved of the behaviour or the client was encouraged to think about why the behaviour was desirable.
 - c. Effective disapproval—The client was immediately told why the staff member disapproved of the behaviour or the client was encouraged to consider why the behaviour was undesirable. Staff members who immediately stopped showing disapproval and started showing approval as soon as the client expressed anticriminal behaviour were also coded as adhering to this CCP.
 - d. Structured learning procedures—Staff members who defined the skill, modeled the skill, role played, provided progressively difficult role-playing scenarios or provided feedback regarding the offender's performance were coded as adhering to this CCP.
3. Problem solving
Correctional staff members who identified the problem, helped the offenders implement a plan, clarified goals, evaluated options, generated alternatives, or evaluated the plan were coded as adhering to this staff practice.
4. Effective use of community resources
Evidence of advocacy (i.e., job referrals, medical referrals, etc.) or brokerage (speaking on behalf of the client at home, school, work, and other organizations) by the therapists.
5. Quality of interpersonal relationships
 - a. Relationship factors—The program staff possessed any of the following characteristics: warm, genuine, humorous, enthusiastic, self-confident, empathic, respectful, flexible, committed to helping the client, engaging, mature, or intelligent.
 - b. Skills factors—The program staff used directive, solution-focused, structured, nonblaming, or contingency-based forms of communication with the offenders.

This category also included staff members selected for their natural abilities (i.e., excellent role players).

It was hypothesized that programs that incorporated elements of CCP would be associated with more positive treatment effects than programs that failed to adhere to these techniques. Furthermore, it was hypothesized that these practices would make significant independent contributions to effect size that would be over and above that contributed by the type of treatment service.

Analyses. The relative frequency of CCPs was coded using a liberal scoring system. Because many studies failed to mention staff characteristics in great detail, any mentioning of one of the indicators within a particular category was scored as that CCP being present within the program. Several sets of analyses were conducted to explore the relationship between CCP and recidivism reduction. First, the Pearson product-moment correlation coefficient was computed between effect size and each CCP. These are reported in Table 1. The correlation coefficients for CCP with appropriate treatment were also explored and are reported in the text. Table 2 examined the effectiveness of CCP across each of the levels of the principles of risk, need, and responsivity.

RESULTS AND DISCUSSION

Table 1 presents the percentage of human service programs that used the CCP of interest as well as its correlation with effect size. Clearly, these CCPs were rarely used in the human service programs that were surveyed in this meta-analysis. The most infrequently used staff characteristic was effective disapproval, and it was found in only 3% of the cases. Even the most commonly used techniques (i.e., skill factors, problem solving, and advocacy/brokerage) were present in only 16% of the studies. These results suggest that the emphasis placed on developing and utilizing appropriate staff techniques has been sorely lacking within correctional treatment programs.

Analyses were also conducted on the set of CCPs as a whole. More specifically, a composite scale of CCPs was computed based on the number of CCPs used (with a minimum score of 0 and a maximum score of 9). Not surprisingly, the mean number of CCPs used within these programs was quite low ($M = 0.95$, $SD = 1.67$; M interindicator correlation = .30; $\alpha = .79$).

Each CCP except advocacy/brokerage and effective disapproval was associated positively and significantly with effect size and with appropriate treatment. An attempt was made to table the mean effect sizes for each CCP at each level of appropriate treatment. However, too few cases were available to make such a breakdown informative, especially for inappropriate treatment. This was not surprising, as one would expect very few CCPs to be used in less appropriate treatment programs.

TABLE 1
CORE CORRECTIONAL PRACTICES: PERCENTAGE OF TESTS WITH AN INDICATOR PRESENT, MEAN EFFECT SIZE FOR EACH LEVEL OF TYPE OF TREATMENT, AND CORRELATION WITH EFFECT SIZE (ϕ)

Indicator	%	Indicator Present			Correlation with ϕ	
		No	Yes			
Core correctional practice						
Relationship factors	5	.11	260	.34	13	.25
Skill factors	16	.10	229	.27	44	.35
Effective reinforcement	5	.11	258	.31	15	.24
Effective disapproval	3	.12	265	.30	8	.17
Problem solving	16	.10	228	.25	45	.29
Structured learning	14	.09	235	.30	38	.37
Effective modeling	14	.10	236	.28	37	.34
Effective use of authority	5	.11	258	.26	15	.17
Advocacy/brokerage	16	.11	228	.16	45	.08 <i>ns</i>

CCP and the Principles of Risk, Need, Responsivity

The preceding investigation demonstrated that the majority of the programs that incorporated elements of CCP were associated with substantially higher mean effect sizes than programs that did not. Further analyses were conducted to examine whether the application of CCP was associated with elevated treatment outcomes under conditions of adherence to each of the principles of effective correctional treatment (i.e., risk, need, and responsivity). To ease interpretation of the findings, a dichotomous CCP variable was created (0 = the program did not use any of the components of CCP and 1 = the program used one or more of the components of CCP).

Table 2 presents the mean effect sizes for each of the levels of risk, need, and responsivity for programs that did and did not use any of the CCPs. Clearly, the mean effect sizes were higher (with the exception of the noncriminogenic needs category) under conditions of adherence to CCP. More important, the mean effect sizes for treatments that adhered to CCP were significantly enhanced for higher risk cases, for programs that predominantly targeted criminogenic needs, and for clinically appropriate rather than inappropriate treatment. These results suggest that the effects of CCP were particularly strong within programs that were consistent with the principles of risk, need, and responsivity.

Finally, the robustness of the importance of CCP was examined using the dichotomous CCP variable introduced previously. More specifically, the simple correlation between programs that did or did not adhere to any elements of CCP

TABLE 2
THE IMPORTANCE OF CORE CORRECTIONAL PRACTICE (CCP) WITHIN THE
PRINCIPLES OF EFFECTIVE CORRECTIONAL TREATMENT

Variable Label	CCP Techniques Used		
	No	Yes	η
Type of human service			
Inappropriate	.01 98	.04 29	.08
Appropriate	.16 71	.25 75	.26*
Risk			
Low risk	.04 38	.11 23	.22
High risk	.09 131	.22 81	.32***
Need			
Noncriminogenic	.07 85	-.04 20	-.03
Criminogenic	.15 84	.24 84	.26***
Responsivity			
Nonbehavioral	.06 145	.13 52	.18**
Behavioral	.18 24	.26 52	.18

* $p < .05$. ** $p < .01$.

was explored under a variety of conditions. The correlation of CCP and effect size was .41 in samples of men ($k = 238$) and .67 in samples of women ($k = 35$), .42 with young offenders ($k = 175$) and .46 with adult offenders ($k = 98$), .47 in community-based settings ($k = 173$) and .42 in institutional/residential corrections ($k = 100$), .40 when ethnicity was not described ($k = 115$), .46 in ethnic minorities ($k = 92$) and .50 with ethnic majority ($k = 66$), and .15 in restorative ($k = 8$) and .42 in retributive ($k = 265$) contexts. Although it appeared that CCP was particularly effective for female offenders and within retributive contexts, neither of these between-group differences yielded significant results upon further examination. These results demonstrated that CCP was an important contributor to successful treatment outcome within a variety of different settings and case characteristics.

CONCLUSIONS

This meta-analysis revealed that CCPs made independent contributions to enhanced effects of human service programs. However, the contributions of CCP only substantially enhanced the positive effects of clinically relevant and psychologically informed treatment programs (i.e., human service programs that adhered to the principles of risk, need, and general responsivity).

This meta-analysis also highlighted the relative infrequency with which effective correctional practices were followed within these controlled outcome studies. This is especially surprising when we know that the psychotherapy literature is replete with articles examining these critical clinical issues (Lambert & Barley, 2001). However, it was unclear for this meta-analysis whether the programs failed to describe their staff and treatment procedures in detail or whether there was an actual lack of these skills present within these human service programs. The latter alternative would certainly be the most discouraging. More research must examine whether staff characteristics play an important role in correctional treatment outcome so that we may be more confident in our current assertions.

A solution to this problem is that correctional treatment program evaluators who report their findings in academic journals (or in unpublished research reports, for that matter) should include a description of the intervention techniques used by the staff and any special staff selection procedures that were put in place. It is to be hoped that future meta-analyses that examine the importance of staff-related variables to program outcome will find more frequent occurrences of these CCPs than the relatively porous 3% to 16% reported here.

Another important point was that almost all of the CCPs were associated with significant reductions in the rates of reoffending. Only effective use of authority did not reach statistically significant levels. Clearly, staff techniques that complemented and encouraged skill building would be expected to be more beneficial to the treatment of an offender than the methods used by the staff members to exercise authority. Nonetheless, programs that did effectively use authority still yielded larger positive effects of treatment than programs that did not.

A final contribution of this meta-analysis is more technical in nature. More specifically, the coding for elements of CCP in this way enhances the previous strategies used to code general responsiveness and, in fact, this new approach increases the amount of explained variance in the model. Clearly, staff practices and attributes require much more attention in future primary and meta-analytic research studies.

This meta-analysis provides strong preliminary evidence supporting CCPs as important indicators of treatment outcome in that despite the liberal scoring criteria used, the content was salient enough to yield additional variance in the analyses. Although past meta-analytic and primary research has predominantly focused on particular program elements and offender characteristics, this review suggests that staff characteristics should be an equally important consideration. The elements of CCP significantly enhanced the positive effects of clinically appropriate correctional treatment programs. Correctional administrators and staff members involved in the design and application of correctional interventions should clearly focus more strongly on staff issues in the future. Attention to this critical detail will substantially increase the therapeutic potential of correctional treatment programs.

The results of this meta-analysis have implications for both applied and research-oriented issues. In terms of the applied arena, this specification of core

practice may enhance the selection, training, and clinical supervision of correctional staff. On the research and evaluation side, the specification of ongoing treatment process is enhanced.

NOTES

1. Andrews and Bonta (1998) provide the complete list of criminogenic and noncriminogenic needs.
2. Individuals interested in receiving more information about the CCP training program for correctional staff should contact the second author.

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