

# A meta-analytic investigation into effective correctional intervention for female offenders

by **D. A. Andrews and Craig Dowden**<sup>1</sup>  
Department of Psychology, Carleton University

**E**vidence from past meta-analytic reviews has suggested that the principles of human service, risk, need and general responsivity are associated with reductions in recidivism for general offender populations. However, a recent study stated "the question of whether or not these findings (i.e., principles of effective correctional treatment) can be generalized to the female offender population still is very much in need of an answer" (p. 517).<sup>2</sup> The purpose of the present meta-analytic investigation<sup>3</sup> was to explore whether adherence to the principles of human service, risk, need, general responsivity, program integrity and core correctional practice were important program considerations for female offenders. The results demonstrated that adherence to these principles significantly enhanced program effectiveness through higher mean reductions in recidivism. This paper concludes with a summary of effective correctional practices for female offenders and directions for future research.

## Introduction

**A**cross settings as diverse as probation and custody, in outcome studies of varying methodological soundness and over several decades, the principles and strategies associated with general social learning perspectives on crime and corrections have received moderate-to-strong support in pursuit of the objective of reduced reoffending.<sup>4</sup> The principles include those of case classification for effective human service in justice contexts,<sup>5</sup> those of integrity in program implementation and delivery,<sup>6</sup> and that of attention to the relationship and structuring dimensions of effective correctional staff practice.<sup>7</sup> The case classification principles of human service, risk, need and general responsivity are now widely appreciated although they have been questioned seriously by some advocates of female-specific treatment.<sup>8</sup> Program integrity refers to management concerns such as the

selection, training and supervision of staff as well as specificity of treatment models and adequate dosage. According to the relationship and structuring perspective on staff practice, positive staff influence is greatest in the context of high-quality interpersonal relationships within which learning opportunities are structured and nurtured through high levels of differential reinforcement and through high-quality

modelling and structured skill building. The descriptions of core practice were developed to describe valuable roles and strategies for all direct contact workers in corrections. What follows is a brief meta-analytic overview of the application of the three sets of principles to correctional programming with female offenders.<sup>9</sup>

## Methodology

The sample of 26 unique studies yielded 45 tests of treatment in samples in which female offenders predominated (in 24 tests, the sample was composed exclusively of female offenders). The 45 effect size estimates were phi coefficients reflecting the percentage-point difference in recidivism rates

between treatment and control groups. For example, an effect size of .30 reflects a 30 percentage-point difference between a 65% recidivism rate in the control group and a rate of 35% in the treatment group.

## Results

Table 1 reveals that mean reduction in recidivism increased with adherence to each of the principles of effective human service. Reductions in the re-offending rates of female offenders were found when human service was

**Program integrity refers to management concerns such as the selection, training and supervision of staff as well as specificity of treatment models and adequate dosage.**

delivered and in particular when human service was delivered to higher-risk cases, when service targeted criminogenic rather than noncriminogenic needs, and when structured social learning and cognitive behavioural strategies were employed. Indeed, the average effect varied from a mild increase in reoffending when inappropriate treatment was delivered to lower risk female offenders (that is,  $-.04$ ) to a very positive high of  $+.36$  when human service was applied in a manner consistent with each of risk, need and general responsivity. Note that only 27% (12/45) of the tests with female offenders involved human service programs consistent with each of the case classification principles.

The indicators of core correctional staff practices are outlined in Table 2. Evidence of these specific practices was much more limited than the evidence favouring adherence with the principles of case classification. At a maximum, only 16% of the tests had workers engaging in the structured learning steps for skill building. Minimally, only 2% of the tests selected workers according to their relationship skills. However, inspection of the mean effect sizes reveals that the majority of the elements of core correctional practice were associated with reduced reoffending. The indicators of core correctional practice formed a meaningful set (alpha coefficient =  $.81$ , mean composite score =  $.67$ ,  $SD = 1.42$ ) and the composite measure of core practice correlated substantially with effect size ( $r = .58$ ).

Table 3 shows that mean reduction in recidivism was significantly enhanced under indicators of integrity for the monitoring of in-program process and intermediate change. The 10 indicators formed a meaningful set (alpha internal consistency coefficient =  $.83$ ) and the composite integrity score was associated with effect size ( $r = .52$ , mean composite score =  $3.44$ ,  $SD = 2.82$ ). As would be expected, however, program integrity was not related to effect size when treatment was inappropriate according to the principles of human service, risk, need and general responsivity (the correlation of integrity and effect size was  $-.02$ ,  $k = 33$  for inappropriate service, and  $.54$ ,  $k = 12$ , for appropriate service). In other words, a high level of integrity in the delivery of otherwise inappropriate treatment was not helpful with female offenders.

Finally, the robustness of the effects of appropriate treatment, integrity and core correctional practice was explored. The effects were found in both randomized and non-randomized studies and

Table 1

### Mean Effect Size by Principles of Effective Human Service

Principle (% with indicator present)	Adherence to Principle		Correlation with Effect Size
	No (k)	Yes (k)	
Human service vs. sanctions without service (78%)	.01 (10)	.18 (35)	.31
Risk (80%)	-.04 (9)	.19 (36)	.40
Criminogenic needs paramount (47%)	.04 (24)	.26 (21)	.49
General responsivity: (33%) (cognitive behavioural/social learning)	.08 (30)	.27 (15)	.38
Adherence to all four principles (27%)	.07 (33)	.36 (12)	.56

Notes: k = number of tests of treatment; ns =  $p > .05$  one-tailed.

These data will be tabled in "What works for female offenders: A meta-analytic review" to be published in Crime and Delinquency, Sage Publications in October 1999.

Effect size estimates are phi coefficients reflecting the percentage-point difference in recidivism rates between treatment and control groups.

Table 2

### Mean Effect Size by Indicators of Core Correctional Practices (CCP)

Indicators of CCP	Absent (k)		Correlation with Effect Size
	Absent (k)	Present (k)	
Relationship skills (2%)	.13 (44)	.64 (1)	.32
Structuring skills (16%)	.09 (38)	.45 (7)	.56
Effective reinforcement (2%)	.13 (44)	.83 (1)	.45
Problem-solving (11%)	.12 (40)	.33 (5)	.29
Effective modelling (9%)	.12 (41)	.43 (4)	.39
Effective disapproval (2%)	.13 (44)	.64 (1)	.32
Effective use of authority (4%)	.13 (43)	.40 (2)	.24ns
Advocacy/brokerage (4%)	.14 (43)	.30 (2)	.14ns

Notes: k = number of tests of treatment; ns =  $p > .05$  one-tailed.

Effect size estimates are phi coefficients reflecting the percentage-point difference in recidivism rates between treatment and control groups.

Table 3

**Mean Effect Size with Indicators of Program Integrity**

Indicators of Integrity	Absent (k)	Present (k)	Correlation with Effect Size
Specific model (56%)	.05 (20)	.22 (25)	.36
Relationship factors (2%)	.13 (44)	.64 (1)	.32
Trained workers (44%)	.07 (25)	.23 (20)	.33
Clinical supervision of workers (29%)	.07 (32)	.33 (13)	.51
Printed program and/ or training manuals (16%)	.12 (38)	.28 (7)	.26
Monitoring of process/change (44%)	.10 (25)	.20 (20)	.22ns
Adequate dosage (40%)	.09 (27)	.22 (18)	.28
Small sample (58%)	.07 (19)	.19 (26)	.26
New/fresh program (38%)	.10 (28)	.22 (17)	.26
Involved researcher (18%)	.08 (37)	.45 (8)	.62

Notes: k= number of tests of treatment; ns = p > .05 one-tailed

Effect size estimates are phi coefficients reflecting the percentage-point difference in recidivism rates between treatment and control groups.

in studies that involved predominantly ethnic minority or ethnic majority groups of offenders. None of the effects of appropriate treatment, integrity and core correctional practice reached statistically significant levels with effect size for adult female offenders. However, only nine tests of treatment involved adult offenders. Our analyses also revealed that appropriate treatment, integrity and core practices were statistically non-significant in residential programs. Our sample of studies did not include a single test of human service with female offenders in a restorative justice context.

## Conclusion

Although little has been understood about “what works” for female offenders, the findings of this meta-analysis outline a theoretically based and empirically validated set of guidelines for delivering effective correctional treatment to this population. Subject to additional research, we conclude now that the principles of case classification, integrity and core correctional practice are highly relevant to program design and delivery with female offenders.

Despite these preliminary findings, several issues still need to be examined. The number of studies of female offenders, and in particular of incarcerated female offenders, adult female offenders and female offenders in restorative justice contexts, is very small. The lack of controlled-outcome studies of specific responsivity factors, in particular of gender-specific responsivity factors, makes them a high priority along with studies of adult and incarcerated female offenders and with studies of human service in a restorative justice context. ■

<sup>1</sup> 1125 Colonel By Drive, Ottawa, Ontario K1S 5B6.

<sup>2</sup> B. A. Koons, J. D. Burrow, M. Morash and T. Bynum, “Expert and offender perceptions of program elements linked to successful outcomes for incarcerated women,” *Crime and Delinquency*, 43 (1997): 512–532.

<sup>3</sup> Some data from this article were extracted from “What works for female offenders: A meta-analytic review,” currently in press in *Crime and Delinquency* (Sage Publications) for the October 1999 issue. More detailed information regarding design methodology and variable definitions along with several additional analyses are reported in that paper.

<sup>4</sup> D. A. Andrews and J. Bonta, *The Psychology of Criminal Conduct* (Cincinnati, OH: Anderson, 1994). See also M. W. Lipsey, “What do we learn from 400 research studies on the effectiveness of treatment with juvenile delinquents?” *What Works: Reducing Reoffending*, J. McGuire, Ed. (Chichester, UK: John Wiley & Sons, 1995). See also F. Losel, “The efficacy of correctional treatment: A review and synthesis of meta-evaluations,” *What Works: Reducing Reoffending*, J. McGuire, Ed. (Chichester, UK: John Wiley & Sons, 1995).

<sup>5</sup> D. A. Andrews, J. Bonta and R. D. Hoge, “Classification for effective rehabilitation: Rediscovering psychology,” *Criminal Justice and Behavior*, 17 (1990): 19–52. See also D. A. Andrews, I. Zinger, R. D. Hoge, J. Bonta, P. Gendreau and F. T. Cullen,

"Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis," *Criminology*, 28(1990): 369-404. See also D. A. Andrews, C. Dowden and P. Gendreau, "Clinically relevant and psychologically informed approaches to reduced reoffending: A meta-analytic study of human service, risk, need, responsivity and other concerns in justice contexts," manuscript submitted for publication.

<sup>6</sup> D. A. Andrews and C. Dowden "Managing correctional treatment for reduced recidivism: A meta-analytic review of program integrity," manuscript submitted for publication. See also C. R. Hollin, "The meaning and implications of 'programme integrity,'" *What Works: Reducing Reoffending*, J. McGuire, Ed. (Chichester, UK: John Wiley & Sons, 1995).

<sup>7</sup> D. A. Andrews and J. J. Kiessling, "Program structure and effective correctional practices: A summary of CaVIC research," *Effective Correctional Treatment*, P. Gendreau and R. R. Ross, Eds. (Toronto, ON: Butterworth, 1980). See also D. A. Andrews and C. Carvell, "Core correctional training-Core

correctional supervision and counseling: Theory, research, assessment and practice," unpublished training manual, (Carleton University, Ottawa, ON: 1998). See also C. Dowden and D. A. Andrews, "The importance of staff characteristics in delivering effective correctional treatment: A meta-analytic review of core correctional practice," manuscript submitted for publication.

<sup>8</sup> M. McMahon, "Assisting female offenders: Art or science." Chairperson's commentary, 1998 International Community Corrections Association.

<sup>9</sup> For details see D. A. Andrews and C. Dowden "Managing correctional treatment for reduced recidivism: A meta-analytic review of program integrity." See also C. Dowden and D. A. Andrews, "What works for female offenders: A meta-analytic review." *Crime and Delinquency*, in press. See also C. Dowden and D. A. Andrews, "The importance of staff characteristics in delivering effective correctional treatment: A meta-analytic review of core correctional practice."

## Are you looking for FORUM?

*Please contact CORCAN Mail Distribution if your address label is incorrect, if you would like to be added to the FORUM mailing list, if you need more copies of a FORUM issue or if you would like to cancel a subscription. Just fill out the form on the inside of this issue's mailing cover (or write a letter) and send it to the following address:*

CORCAN MAIL DISTRIBUTION  
Publications Service  
La Macaza Institution  
321 Chemin de l'Aéroport  
La Macaza, Quebec J0T 1R0  
Tel: (819) 275-2315, ext. 7121  
Fax: (819) 275-3037

*You can also reach CORCAN Mail Distribution by phone. In Canada and the United States, call toll-free: 1-800-665-8948. In other countries, call collect: (819) 275-2315, ext. 7121.*