

**AN OVERVIEW OF TREATMENT EFFECTIVENESS: RESEARCH AND
CLINICAL PRINCIPLES**

D. A. Andrews
Department of Psychology
Carleton University
Ottawa Canada

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This paper has two sections. Section 1 provides an overview of the research literature on the effectiveness of criminal justice interventions and correctional treatment services on criminal recidivism. Section 2 reviews principles of effective correctional treatment with examples of effective programming.

The thrust of the paper is very applied and very practical in that the focus is on what the police, courts, corrections, and other agencies actually do with offenders. The issues reviewed, however, have been controversial in academic criminology, criminal justice, and corrections for decades. Thus, while the thrust is applied and practical, some attention must be paid to the academic, professional, and ideological roots to what is now widely-recognized as pro-punishment and anti-treatment bias in major segments of mainstream academic criminology and criminal justice. Because the anti-treatment bias was reinforced by appeals to scientific rhetoric, the very same scientific rhetoric underlying this review, this paper must address methodological issues.

Please note, there is nothing wrong with scientific rhetoric, except when it is misused systematically in some academic circles in order to discredit and discount positive findings in the areas of prediction and treatment. Sometimes, scientific rhetoric was used not to construct knowledge but rather to destroy knowledge in the areas of prediction and treatment.

SECTION 1. THE NEWS: OVERVIEW OF TREATMENT EFFECTIVENESS

This section explores the literature on the effectiveness of criminal justice and correctional interventions in the reduction of criminal recidivism. We will take a **basic science** or **rational empirical** approach to the literature, an approach that values human diversity, the complexity of human experience, logic, and research evidence. Unsparing criticism will be combined with respect for evidence. This approach is a major value underlying the **psychology of criminal conduct (PCC)** or the human science of criminal conduct. The PCC approach and the conclusions reached contrast dramatically with the content of many

mainstream sociological criminology textbooks and with the assumptions underlying sentencing and correctional policy in many jurisdictions.

I begin with a statement of our conclusions. Our conclusions in regard to the effective reduction of recidivism will be as follows:

1) Official punishment without the introduction of correctional treatment services does not work.

2) Providing correctional treatment services that are inconsistent with the principles of risk, need and responsivity does not work.

3) What works is the delivery of clinically and psychologically appropriate correctional treatment service, under a variety of setting conditions that may be established by the criminal sanction.

4) The delivery of appropriate correctional treatment service is dependent upon assessments that are sensitive to risk, need and responsivity.

We will be defining "risk," "need" and "responsivity" presently, and in some detail in Section 2. Briefly, the three principles speak to three key clinical (and management) issues:

1) To whom are the more intensive treatment services best offered when the objective is reduced recidivism? -- to higher rather than lower risk cases when the objective is reduced recidivism (low risk cases will succeed with less intensive service)

2) What should we target? -- criminogenic needs if the objective is reduced recidivism (criminogenic factors are dynamic characteristics of people and their circumstances that actually link with criminal behavior)

3) What style and mode of service should be employed? -- one matched with the learning styles of offenders (e.g., cognitive behavioral / structured social learning approaches).

These principles assume a body of knowledge regarding predictors of the criminal behavior of individuals (risk factors), the causes of criminal behavior (criminogenic need factors), and the potential to influence the occurrence of criminal behavior (an effective intervention technology).

Does such a body of knowledge exist?

There now is a human science of criminal conduct. There are theories of criminal conduct that are empirically defensible and that may be helpful in designing and delivering effective service. The literature is reasonably strong and supports vigorous pursuit of ethical, decent, humane and cost-efficient approaches to prevention and rehabilitative programming for higher risk cases under a variety of conditions of just sanctioning. The active and effective human service agency may contribute to a still more powerful knowledge base by building assessment, reassessment and research into the agency.

A major issue, one on which research is really only beginning, is how to make use of what works -- research on the dissemination, implementation, and ongoing development of effective programming. (Andrews & Bonta 1994 236.)

This human science of crime (this psychology of criminal conduct: PCC) may be defined by the task it sets -- that task is understanding individual differences in criminal behaviour -- and by the three types of understanding it seeks. These three are theoretical, empirical and practical:

*A theoretical understanding entails constructing models or explanatory systems that are logical and meet certain other criteria such as testability, simplicity, generality, and parsimony.

*An understanding must be empirically-defensible in the sense that it is supported by research findings. The two major empirical issues here are the prediction of criminal activity and the ability to influence criminal activity.

* A practical understanding is one that yields useful suggestions for criminal justice, correctional and any other agency or individual with interests in the prediction and control of criminal behavior.

Knowledge of the ability to influence criminal behaviour comes from **controlled outcome studies**. What is a controlled outcome study? At a minimum, 1) an intervention group and a comparison group, 2) comparable at pretest are 3) compared post-treatment on an objective, reliable and valid measure of criminal recidivism. Ideally, the classical experimental design calls for random assignment to treatment and control groups, equal treatment except for delivery of the experimental treatment, and follow-up for an equal length of time. All of the following discussion of treatment effectiveness will be limited to reviews of controlled outcome studies that approximate these ideals.

Ideally, program evaluators want to be in the position of being able to conclude that a statistically reliable difference in the recidivism rates of the intervention and comparison groups was due to the experimental intervention. The strength of this conclusion increases when the difference in recidivism rates is larger versus smaller, when the possibility that the difference could be due to chance is minimal, when preintervention differences in the participants were insufficient to account for postintervention differences, and when there is little evidence that loss of subjects from pre-to-post was selective and might have favored the intervention condition. Our sense of understanding the effects of treatment on recidivism increases even further when the intervention, its implementation and its effects on recidivism reflect a well-articulated theoretical perspective on crime and treatment. Confidence and understanding increase still further when it can be shown how general are the effects (for example, how do the effects depend upon types of setting or type of offender?).

Ideally, too, program evaluators also want to feel confident if they conclude that the recidivism rates of an intervention and comparison condition did not differ post-intervention. Confidence in this conclusion increases when the difference in rates was small and statistically nonsignificant, when the number of subjects was large enough to allow a

reasonable test of statistical significance, when the intervention was actually delivered with some integrity, when comparison subjects were not inadvertently exposed to the treatment, when the measures of outcome are reliable and valid, and when other tests of similar interventions have yielded null or negative effects.

As we shall see, reviewers of the criminal justice intervention literature have adopted various approaches to deciding whether a particular test found an effect of intervention. In some of the earlier reviews that standard was impressionistic and difficult to pin down (as in fact were the conclusions of the authors of the original evaluation studies). The methods of reviewing and compiling program evaluation results have now progressed well beyond the impressionistic approach.

By the 1960s and 1970s, reviewers were looking for the most part for a statistically significant difference in recidivism rates. With recent advances in research compilation methods, it is now known that this **box score approach** is very conservative and severely under-estimates the state of knowledge. One of the problems with simply counting the number of tests yielding statistically significant effects is that statistical significance may be low or unacceptable in particular tests because of a problem such as too few subjects.

Box Score Analysis

Now we are ready to begin our review of the reviews of the outcome literature. Recall that the dominant position within mainstream criminology and criminal justice was some variation on a theme of "nothing works," and that position was often (with some outstanding exceptions) expressed with a distinct sense that official punishment is preferable to the delivery of correctional human service.

Typically, the "nothing works" debate is dated back to Martinson (1974) and his subsequent TV and conference appearances wherein more or less firm declarations of "nothing works" were presented. In fact, there were earlier reviews of the literature and many of these early reviewers too

reached negative conclusions regarding the effectiveness of correctional treatment (for example: Kirby 1954; Bailey 1960; Logan 1972; and even through Whitehead & Lab 1989).

In part their negative conclusions reflected the healthy scepticism of science and the availability of relatively few well-controlled program evaluations. There was something else present in these conclusions, however, and this was anti-treatment bias. It was evident in the reviewers willingness to accept "no effect" conclusions with little serious criticism, while studies that reported reduced recidivism were subjected to intense criticism. Often this criticism was of a pseudo-scientific variety in that methodological threats to validity were mis-applied systematically. Michael Gottfredson called this "treatment destruction," while we use the more general phrase "knowledge destruction."

My colleagues and I have summarized these knowledge destruction approaches in many manuscripts. Here follows another look, one in which first I state a real threat to the validity of a conclusion, and then show in parentheses how the scientific rhetoric was mis-applied in criticisms of findings favorable to treatment:

- * if the theory underlying the treatment approach is flawed, the treatment should fail to reduce recidivism
(example of misuse: if crime is only a reflection of social inequality, the finding that a change in personal attitudes was followed by reduced recidivism must be in error)

- * if unreliability in the measurement of recidivism is a serious problem, treatment effects will be underestimated
(example of misuse: the positive effect of treatment may be dismissed because of unreliability in the assessment of recidivism).

- * if there are deviations from the ideals of the experimental design, treatment effects will be over-estimated, under-estimated, or unaffected depending upon the details of the deviations

(example of misuse: any deviation from experimental ideals, allows us to reject findings favourable to treatment).

* if the positive effects of certain approaches to treatment are limited to certain types of offenders (for example, the higher risk, the more psychologically mature, or the more motivated), the studies have yielded important information on "who responds to what"

(example of misuse: if a treatment does not work for everyone under all conditions, treatment does not work).

In parentheses above are the illogical types of arguments that allowed many of the earlier narrative (non-quantitative / not meta-analytic) reviewers of the literature so easily to come to the conclusion that "nothing works."

Our review of the reviews, however, will differ from the approach of the original reviewers in one very important detail beyond recognition of knowledge destruction. We will distinguish between studies of the effects on recidivism of variation in official punishment and studies of the effects on recidivism of variation in the delivery of correctional human services. This distinction may be illustrated by reference to how colleagues, students and I approached the distinction in the Carleton University review (Andrews, Zinger, et al. 1990):

* Variation in criminal sanctions. These tests of the effects of criminal justice interventions were based on front-end variation in the type or severity of criminal justice processing. For example, the tests of intervention entailed comparisons of police cautioning versus additional processing, informal adjustment versus probation, probation versus custody, open versus secure custody, and noncompletion versus completion of restitution programs. These types of interventions reflect considerations that arise from perspectives on processing such as labeling, deterrence and just desert. With these perspectives, the most important point is less versus more criminal justice processing.

* Variation in correctional treatment service. These treatments involved the delivery of human services and the variation reflected

treatment versus some nontreatment or alternative treatment condition. For example, group counselling versus regular prison programs, milieu therapy versus alternative organization, and studies of academic/vocational approaches, family counselling, structured skill training, one-on-one paraprofessional programs, individual counselling, token economy, etc.. Note that in these tests, the criminal sanction constitutes a setting or contextual condition within which the effects of variation in treatment services are explored. In other words, some of these tests of treatment service were conducted with probationers, some with prisoners, and others with people who had been diverted from criminal justice processing.

Even with the problem of low sensitivity to effective programming, the box score results clearly favor rehabilitation programs over official punishment. Among the many reviews of the outcome literature published from the 1950s through today:

Not a single reviewer of the controlled studies of the effects on recidivism of variation in official punishment was able to find studies reporting large or consistent reductions in recidivism through sanctioning.

In contrast, the reviews of controlled outcome evaluations of correctional treatment services found a minimum of 40% and up to 80% of the studies reporting reduced recidivism.

 Insert Table 1 about here

Inspection of Table 1 will reveal this positive pattern of results across several reviews of the literature in which I or the original authors were able to count the number of tests of effectiveness which actually found evidence supporting treatment. Some variability exists across reviews in the definition of "evidence favorable to treatment." For example, in working with the first five reviews in Table 1, I used the conservative standard of a statistically significant reduction in recidivism.

Antonowicz and Ross (in press) not only used this conservative criterion but included only the most methodologically-sound studies of correctional treatment. The Lipsey (1990) estimate, based on 443 tests (including tests of punishment), required only that the recidivism rate of the experimental condition be less than the rate found in the comparison condition.

The most stringent criterion for "effectiveness" in Table 1 was that employed with the Carleton University group of studies (Andrews, Zinger et al., 1990). Here an effect size of at least .20 was demanded in order to code the test as favorable to the experimental intervention (the correlation coefficient as a measure of effect size will be introduced below). As shown in Table 1, even with the stringent criterion of success, 40% of 124 tests of correctional treatment favored treatment.

The meaning of the fact that 40% of tests of treatment reported success becomes clear when compared directly with the success rate found in the Carleton University sample of studies that examined variation in criminal sanctions (or official punishment). Not one of 30 tests of official punishment (0%) favored the more severe punishment option over less severe punishment.

A 40% hit rate for human service relative to a hit rate of 0% for official punishment would by any logical standard suggest that correctional treatment services are worthy of serious consideration when the objective is reduced recidivism. For example, one might argue that in order to be considered a favorable finding any particular test of treatment be required to show a correlation of .30 (rather than .20) between the recidivism rates of the treatment and comparison conditions. Under these conditions, the percent of tests of correctional treatment yielding favorable findings would certainly fall below the 40% reported when a .20 was the standard. Even then, however, the reports of success with official punishment would remain at 0%. In other words, it appears that evidence favorable to correctional treatment service clearly exceeds the evidence favorable to official punishment.

In summary, regardless of the review or the standard of effectiveness set, when one examines the actual studies reviewed the positive evidence regarding effective intervention is found in tests of correctional treatment services rather than tests of official punishment. In understanding effective intervention, we suggest that the official sanction (diversion, probation, custody) is best viewed as a setting condition or context within which treatment services may or may not be applied.

Our box score analysis certainly supports more careful exploration of the notion that some types of correctional treatment services, offered under some conditions, to some types of offenders appear to have successfully reduced recidivism. To explore these issues we turn to the power of true meta-analyses in which potential treatment and methodological correlates of effect size are explored.

Meta-Analytic Reviews

The favored approach now is **meta-analysis**. **Meta-analysis** is a systematic and quantitative approach to literature reviews in which a standard measure of the magnitude of the effect of intervention on recidivism rates is calculated for each test of intervention. This is the first step in conducting a meta-analytic review of the outcome literature. Rather than providing a simple count of the number of studies reporting reductions in recidivism (the box score approach), meta-analyses yield estimates of the magnitude of the association between treatment and reduced recidivism.

The second step in a meta-analysis is to compute an average estimate based on all available estimates derived from the studies of the intervention of interest. Then, reviewers can ask not only whether the number of findings favoring intervention exceed the number that don't, but they can ask whether the average effect is sufficiently large to conclude that it is no longer sensible to believe that the average effect is zero (or for that matter equal to or less than any other hypothesized magnitude of effect). Not only does systematic exploration of average findings become possible, but so does the possibility of exploring potential sources of

variability in the estimates. In other words, are there methodological or treatment or other reasons why some of the estimates were well below the average estimate and/or why some of the estimates were well above the average effect estimate.

Among the various measures of effect size that may be employed is the **Pearson Product Moment Correlation Coefficient**. This is the effect size estimate that we will be using most frequently in this paper. The majority of tests of the effects of intervention are in the form of two-by-two tables (the recidivism rates of two groups are compared) and in this case the Pearson Correlation Coefficient is also known as a **Phi Coefficient**.

The size and sign of the correlation coefficient directly reflects the magnitude and direction of the difference in the recidivism rates of the experimental and comparison groups. Thus, for example, a coefficient of +1.00 indicates that the recidivism rate of the experimental treatment group was 0%, while the recidivism rate within the comparison group was 100% ($100 - 0 = 100$). Similarly, a coefficient of -1.00 reflects directly a recidivism rate of 100% in the treatment group compared to a rate of 0% in the comparison condition ($0 - 100 = -100$). A coefficient of .00 indicates that the recidivism rates of the treatment and comparison groups were identical (30% compared with 30%, or 70% versus 70%, for example).

Coefficients of 1.00, -1.00 and .00, of course, are quite rare. So rare, in fact, that when they are reported you should take a very careful look at the study reporting them. More often, the correlation coefficient takes a value somewhere between 1.00 and .00. For example, the average correlation between lower class origins and crime, averaged across many studies, is approximately .06 (Andrews & Bonta 1994). The value of .06 is low, but remember, a value of such trivial magnitude has fuelled class-based theories in criminology for years. On the other hand, indices of dysfunctional family process in relation to crime have yielded an average correlation of approximately .20. The best-validated of risk/need assessment instruments, based on surveys of the number and variety of risk factors yield coefficients in the area of .30 to .40.

When the overall level of recidivism (base rate) in any study is 50% and equal numbers of people are included in the experimental and comparison groups, the correlation coefficient is the simple difference between the recidivism rates of the treatment and comparison conditions. Thus, for example, a coefficient of .20 reflects a recidivism rate of 40% in the treatment group compared with 60% in the comparison group. A coefficient of .30 reflects a difference in recidivism rates of 30% (35% in the treatment group compared with 65% in the comparison groups). Although the overall rate of recidivism is not always 50% and/or the number of offenders in each group is not always equal, the value of the correlation coefficient will always reflect the difference in recidivism rates (albeit not be equal to the simple difference score).

The Carleton University meta-analysis (Andrews, Zinger et al., 1990)

Recall that the Carleton University review involved 154 tests of the effectiveness of correctional interventions. Each test involved an exploration of the magnitude of the link between reduced recidivism and an experimental and a comparison condition.

Overall, the Carleton University study found that the average correlation between 154 tests of correctional interventions and reduced recidivism was .10. This is a very modest average effect indeed, representing an average reduction of only 10% relative to the comparison group (in samples with equal Ns and a base rate of recidivism of 50% -- that is, 55% in the control group vs. 45% in the intervention group.).

As modest as the overall average effect may be, a mean effect size of .10 is clearly greater than .00 (that is, the value consistent with "nothing works"). If the average effect in 154 tests is .10 then something must have been found to work at least moderately well, or the average would have been closer to .00 or even have taken a negative value).

To place .10 in context it is valuable to consider the mean correlation found between lower class origins and criminal conduct. That average, for that most favored of variables in mainstream criminology is .06. If social

class is still considered important with an average effect of .06, why would intervention be rejected with an average effect of .10? A certain bias perhaps?

The Carleton meta-analysis allowed exploration of three potential sources of variability in effect size estimates. The first, of course, was tests of official punishment versus tests of correctional treatment services (as described above in the form of a box score analysis). The second was the use of behavioral intervention methods. Third, we explored applications of the clinical principles of risk, need and responsivity.

Once again, tests of official sanctioning versus tests of correctional treatment. As already seen through inspection of Table 1, none of the 30 tests of official punishment found an effect of at least .20, while 40% of the 124 tests of correctional treatment service were found to meet or exceed that standard of effectiveness. By averaging effect size estimates we find that the average correlation coefficient for the 30 tests of more versus less official punishment was -.07. In brief, not only did not a single test of more criminal processing reach the effectiveness standard of .20, the average effect of more official punishment was a slight increase in criminal recidivism. In contrast, the mean effect size of 124 tests of correctional treatment services was .15.

A mean effect size of .15 is modest, representing a reduction in recidivism rates from 57.5% in the comparison condition to 42.5% in the treatment condition. It, however, is clearly greater and more positive than -.07 (the mean effect of punishment), than .00 (the "nothing works" value), and than .10 (the value of all tests, punishment and treatment combined). Obviously now, one of the major factors contributing to conclusions of failure in reviews of the criminal justice and corrections outcome literature was the inclusion of tests of the effects of official punishment.

Now we can do better than simply compare official punishment and undifferentiated human service. Prior reviews of the literature and the social learning perspective underlying our PCC suggest that treatment services may be differentiated according to style and mode of service. In

particular, the principle of responsivity suggests that human service of the behavioral type is more promising than less structured and more evocative styles of service. Indicators of a behavioral, cognitive behavioral and/or social learning approach include use of the following approaches to behavioral influence:

- * Modeling (demonstrating valued behavior on order to encourage imitation)
- * Reinforcement (rewarding valued behavior when it occurs)
- * Practice (with reinforcement and guided correction)
- * Graduated practice and successive approximation (working with components of complex behavior)
- * Extinction (not providing rewards for negative behavior)
- * Resource provision
- * Symbolic modeling (concrete verbal suggestions, giving reasons, prompting, cognitive restructuring)

Applying these indicators to the 124 tests of correctional treatment service yields 41 tests of behavioral service and 83 tests of nonbehavioral treatment. The average effect of behavioral treatment was .29 compared with only .07 for nonbehavioral service (and, of course, the average effect of criminal sanctions remains at -.07).

Finally, the Carleton University studies were subjected to a content analysis that reflected the principles of risk, need, and responsivity. The 124 tests of correctional treatment were assigned to three groups on the basis of clinically and psychologically appropriate treatment: inappropriate treatment, unspecified treatment, and appropriate treatment. These principles are developed in Section 2. For now, note how mean effect size varied with appropriateness of treatment:

Criminal Sanctions	-.07 (in 30 tests)
Inappropriate Treatment	-.06 (in 38 tests)
Unspecified Treatment	.13 (in 32 tests)
Appropriate Treatment	.30 (in 54 tests)

The mean effect of appropriate treatment represents a recidivism rate of 65% in the comparison condition compared with 35% in the appropriate treatment condition.

My colleagues and I concluded that the evidence was now strong on several intervention issues:

- *the nothing works position was no longer tenable in regard to correctional treatment services

- * the nothing works position was clearly solid in regard to the empirically-demonstrated effects of reparative and retributive sanctioning

- * the issue for correctional treatment services was "what works"

- * the incapacitation effects of sanctions involving custody had yet to be established (because the studies reviewed explored post-disposition recidivism and did not include in-program recidivism).

Within a new meta-analysis, focusing on family interventions (Andrews, Gordon, Hill & Kurkowski 1993), an additional factor has emerged as very important. Therapeutic integrity, broadly defined, has been found to not only link with reduced recidivism but to be more characteristic of clinically and psychologically appropriate treatment than with alternative family interventions such as client-centred and psychodynamic. The broad definition of therapeutic integrity included the following:

- * a specific model linking intervention, intermediate targets, and reduced recidivism (printed manual)

- * trained workers
- * clinically supervised workers
- * printed/taped manuals for training and service delivery.

Within an on-going expanded meta-analysis, the conclusions of my colleagues and I have been extended to include the following in regard to the inflation of treatment effect size estimates through study and methodological factors such as:

- * small samples (few subjects) in the experimental and control groups
- * evaluator involved in the design / delivery of treatment

Still, the contributions of treatment to reduced recidivism exceeded and were incremental to the integrity and methodological factors.

The Lipsey (1990) Meta-Analysis. The Lipsey review is the most comprehensive of the systematic quantitative reviews completed to date. Lipsey documented in a convincing matter that treatment variables were associated with reduced recidivism, even after many methodological threats were controlled statistically. Larger effect sizes were associated with the aspects of correctional treatment reviewed below:

- 1) longer duration of treatment / more meaningful contact (except for continuous contact of residential care)
- 2) services provided outside of formal correctional settings
- 3) treatment compared with "no treatment" rather than "alternative treatment"
- 4) behavioral-oriented, skill-oriented, multi-modal
- 5) service for higher risk cases

- 6) treatment attends to extra-personal circumstances (eg., family).

The contribution of these aspects of treatment survived statistical controls for the following methodological variables that were associated with larger effect size estimates:

- 1) smaller sample studies
- 2) shorter follow-up periods
- 3) more reliable and valid outcome measures
- 4) less explicit reporting of method and statistical procedures
- 5) nonequivalence of tx and control groups (depending upon specifics of nonequivalence)
- 6) equal attrition from treatment or control group (vs. greater attrition from either group)
- 7) services under the influence of the evaluator (a treatment variable for lipsey).

In summary, entering the effectiveness debate with a pure empirical orientation, and with sophisticated control of methodological factors, Mark Lipsey concluded that:

- a) methodological conditions do influence effect size estimates
- b) treatment conditions influence effect size estimates even with methodological conditions controlled
- c) the best treatments were structured and focused
- d) the best treatments reduced recidivism rates by about 30% on average

e) the best treatments (with few exceptions) were those that had been defined independently as most "clinically relevant" by the Carleton University group (Andrews, Bonta & Hoge, 1990).

All in all, Section 1 has shown how respect for and attention to diversity in both people and programming allowed us to make some sense of the correctional outcome literature. This combination of respect for diversity and respect for evidence is characteristic of the psychology of criminal conduct (PCC) that underlies our approach to principles of effective treatment.

SECTION 2. PRINCIPLES OF EFFECTIVE TREATMENT

PCC values empirically-established correlates and predictors of crime no matter the disciplinary or professional associations of the risk factors implicated. Thus, all of the following types of risk factors are valued:

biological

personal

interpersonal

familial

structural/cultural

politico-economic

circumstantial

the immediate situation of action.

The rational empiricism of PCC demands unsparing criticism of theory and research but it also suggests that evidence is of over-riding significance. The alternative of theoreticism is potentially too damaging wherein ideology, politics, professional, and personal interests define

knowledge without regard for evidence. For far too long in criminology and criminal justice, the empirical facts regarding risk/need factors and effective intervention have been hidden or dismissed or by appeals to class-based theories of crime, by over-generalization of justice theories, and by a preoccupation with community-wide aggregated crime rates and/or justice ideals.

Class-based theories of crime. Whatever their value may be in explaining variation in aggregated crime rates, the class-based perspectives of anomie/strain, subculture, labelling, and conflict/Marxism are very limited in explaining individual differences in criminal activity. Socio-economic class of origin, as we shall see, is simply and at best a minor risk factor for crime. Similarly, the tendency for class-based theories to dismiss individual differences in attitude, belief, motivation, skill and temperament renders them very weak. The psychology of human behaviour underlying these theories is also very weak in that the concepts of "innovation" (anomie), "conformity" (subculture), "stigma" (labelling), and "power differential" (conflict/Marxism) do not touch directly with the powerful determinants of human action. Rhetoric about "social location" and "social reaction" is just that in the absence of an appreciation of individual differences and an appreciation of the psychological complexity of effective official processing.

The justice perspectives. Official sanctioning tends to reflect one or more of the three perspectives of labelling, deterrence and/or just desert. Once again, the notion of "stigma" within labelling is of limited value without specification of both person characteristics and official processing. The "fear of official punishment" suggested by deterrence theory too rests on a naive human psychology. Just desert theorists tend to agree that official punishment is irrelevant to reduced recidivism and focus instead on just punishment and upholding the rule of law and broader values in the community as a whole. Similarly, retribution and reparation, as purposes of sentencing, have little to do with the causes of individual criminal conduct no matter how loud or seductive the rhetoric around "accountability" and "teaching them a lesson."

My rather negative assessment of class-based and justice perspectives is underscored by the fact that the above-noted perspectives are now all being reformulated in ways more compatible with PCC. In Canada, for example, we now hear former antitreatment proponents of just desert stating publically that there is no alternative to treatment if we value reduced recidivism. Two of mainstream criminology's major punishment scholars, John Braithwaite (1994) and Lawrence Sherman (1994), each appear to be becoming very selective in their specification of the conditions under which official punishment may reduce recidivism and are very clear now on the point that the main effect of official punishment is often increased crime..

The general personality and social psychological approach within PCC. The following summary is adopted from notes prepared for the National Parole Board of Canada which in turn reflect Andrews and Bonta (1994). There are few scholars or practitioners who would now argue against the position that the occurrence of criminal acts reflects the outcome of particular individuals being in a particular situation at a particular time. This perspective is shared by behaviorists, social learning theorists, symbolic interactionists and many others in social psychology.

The immediate causes of criminal activity reside in the immediate situation of action. Situations, by virtue of objective features and prior personal experience, may vary in the temptations and controls represented. In that immediate situation, a crime occurs when:

- * the person has reasons to and any objections have been neutralized
- * an intention to behave that way is formed
- * the personal choice is made
- * self-efficacy beliefs suggest that "I am able to do it" and "it will payoff"
- * the situation is defined as one in which it is "OK" to behave that way
- * the balance of signalled rewards and costs shifts in favor of crime.

Thus, understanding and managing risk of recidivism entails understanding:

- * individualized situational risk factors, and

- * understanding those personal, interpersonal and circumstantial risk factors which shape particular intentions, choices, self-efficacy beliefs, definitions of situations, or shifts in signalled rewards and costs.

A major task of Section 2 is to review those risk factors. First, however, I want a psychological perspective on the multiple sources of variation in the outcomes of deliberate programming. The clinical principles of effective intervention operate in particular contexts and the implementation issues may be crucial. Let us take it in turn. In order to reduce recidivism (an ultimate outcome):

- 1) Changes in criminogenic factors must be induced (positive intermediate outcomes on risk/need factors)

- 2) These changes may be influenced by the process and content of service delivery

- 3) Typically, service delivery itself reflects a service plan

- 4) Service plans and service delivery occur within the context of a particular program structure. The structure of a program reflects the formal roles and statuses assigned to workers and clients in policy manuals and procedural manuals, the selection, training and supervision of workers, and the more informal structure and culture of a program.

- 5) The characteristics that workers bring to a program will have implications for program structure, service delivery and the achievement of intermediate objectives. The major characteristics will be defined below as relationship and structuring skills.

6) The characteristics of clients too will impact on the structure of the program, the services planned and delivered, and the intermediate objectives achieved.

7) Characteristics of the surrounding community (including the host agency) will set the context for effective programming. In particular, one would look for social, political and economic support for programming.

Other sessions in this training seminar will focus upon implementation and organizational issues (Van Dietsen, Fogg, Perris), and I will return to selected aspects on the following pages. Now, however, we turn to the clinical principles of effective treatment.

Principles of Effective Treatment

The clinical principles with the strongest research support are as follows:

- * Risk
- * Need
- * Responsivity

The Risk Principle

Two key aspects of the risk principle are our ability to identify lower and higher risk cases and whether, in fact, treatment services are best reserved for higher risk cases. I suggest that empirically-sound knowledge of risk factors has been in the field at least since the 1950s and 1960s. Consider the following list of potential risk factors generated independently by two classic cross-sectional studies, the Gluecks (1950) and Hirschi (1969):

- * Energetic
- * Easily bored
- * Mesomorphic
- * Below average verbal intelligence
- * Weak self-control

- * Violation of many rules
- * Dislike school
- * Weak conventional ambition
- * Poor family relations
- * Poor parental supervision
- * Antisocial attitudes
- * Antisocial associates

The Gluecks studied frequent and serious officially defined young offenders while Hirschi surveyed the self-reported delinquency of school children, and yet they agreed on the potential risk factors. Still, in some current textbooks the potential to differentiate lower and higher risk cases is trivialized by objections that the Gluecks studied "exceptional" young offenders while Hirschi studied "mundane" delinquents (see Andrews and Wormith, 1989, for many such examples of anti-prediction knowledge destruction efforts).

To-day, thanks to many truly longitudinal (predictive) studies and to meta-analyses of predictor variables, it is possible to provide a list of empirically-validated risk factors. The major risk factors include:

- * antisocial attitudes, values, beliefs, rationalizations, and cognitive-emotional states such as anger, resentment, and defiance (personal support for crime)

- * antisocial associates and relative isolation from anticriminal others (interpersonal support for crime)

- * a history of antisocial behaviour, evident from a young age, and involving a number and variety of harmful acts in a variety of situations (knowledge of the immediate gratifications of crime and of its generally more delayed punishment)

- * weak problem solving and self-management skills in combination with a temperamentally aggressive, callous, and egocentric style (the personality supports for crime)

- * a family life characterized by low levels of affection and weak discipline and supervision (inconsistent love and discipline, and perhaps outright abuse/neglect)

- * generalized difficulties in the domains of school, work and leisure (these problems may be associated with substance abuse) and low levels of personal socio-economic achievement.

Among the weaker risk factors are the following:

- * lower class origins, as assessed by parental educational/occupational/financial indices and by neighborhood characteristics

- * personal distress as assessed by measures of low self-esteem, anxiety, worry, and depression, and/or by alienation, isolation, powerlessness, and/or by psychopathology (psychopathy excepted)

- * a host of biological / medical indicators that have yet to be well - integrated empirically or theoretically.

The impressive validities of existing risk/need assessment instruments such as the LSI, the Wisconsin, and the Hare Psychopathy Checklist provide convincing evidence that the ability to predict criminal recidivism increases dramatically with assessment of the number and variety of major risk factors. None of this evidence suggests perfect prediction (100% accuracy), but predictive validity clearly exceeds chance levels, approaches 80% accuracy, and is of practical value.

The utility of risk assessment is particularly strong when assessments are conducted not to implement doomsday decisions (such as life imprisonment) but to enact the least restrictive interpretation of the criminal penalty when the ideals of just desert, efficiency and protection of the public are paramount. Thus, for example, it has been demonstrated that low risk probation cases may be safely assigned to minimal supervision, and that the low risk incarcerates may be safely assigned to group home environments. Bonta and Motiuk (1990) have also shown that

the availability of risk assessment scores successfully increases the number of low risk cases safely assigned to less restrictive settings.

The utility of risk assessment is also evident in the area of classification for purposes of treatment. At one level, this principle is painfully obvious -- why would treatment resources be wasted on people who are unlikely to get into trouble with the law? "If it ain't broke, don't fix it!" From the perspective of program evaluation, how could one ever discover that Product X reduces headache pain, if Product X was tested on individuals who did not have a headache and were not prone to headaches?

At other levels, the risk principle is counter to some dominant themes in clinical textbooks and clinical experience. Social workers are advised that casework is effective, assuming the case is not too needy -- the "casework paradox." Clinical psychologists and psychiatrists may have been exposed to the "YAAAVISS syndrome (spelling modified by DAA) -- psychotherapy works as long as the client is Young, Affluent, Attractive, Anxious, Verbally Intelligent, Socially Successful. In addition, in clinical experience, low risk cases are motivated, appreciative of the clinician's attention, and their status at closure is favorable. The problem is that their favorable status at closure may also have been found in the absence of service. If they are not prone to headaches, why would we expect anything but low post-treatment rates of headache?

Please consider in detail the following example of the effects of service-oriented intensive supervision of probationers. The probationers were assessed at intake on their risk of recidivism and assigned in a random manner to either routine probation or to augmented probation service. As might now be expected, the intake risk assessment was predictive of recidivism within both the regular and augmented conditions. Under regular probation conditions, the recidivism rates of lower and higher risk cases was as follows:

- * higher risk cases -- 75%
- * lower risk cases -- 7%

Obviously, lower risk cases had better outcomes on average than higher risk cases. Under augmented probation service conditions, the recidivism rates of lower and higher risk cases was as follows:

- * higher risk cases -- 33%

- * lower risk cases -- 14%

Once again, and obviously so, lower risk cases had better outcomes on average than did higher risk cases. Does the pattern of results shown above in both the regular and augmented service conditions support the view that only lower risk cases gain from service? Not at all!

If you want to draw valid conclusions regarding who gains from enhanced treatment services then you must compare the outcomes of less and more enhanced service for low risk cases and for high risk cases. **Treatment effects reflect the differences in recidivism found between different treatment conditions, and not the differences found between lower and higher risk cases within any particular treatment condition!**

Now we will actually explore the effects of treatment on higher risk probationers and find that augmented service reduced the recidivism of higher risk probationers relative to regular probation:

- * Augmented service -- 33%

- * Regular probation -- 75%

Compare the above-noted finding with the results of a comparison of the recidivism rates of low risk cases assigned to regular and augmented service:

- * Augmented service -- 14%

- * Regular probation -- 7%

Above there is no evidence that augmented service reduced the recidivism rates of the lowest risk cases. This is the finding that we continue to uncover when treatment is otherwise appropriate (according to need and responsivity), when the highest risk cases are not composed of psychopaths, and when the lower risk cases in any particular sample are, in fact, low risk cases according to a comprehensive survey of major risk factors.

Surprisingly, to my colleagues and I, Lipsey (1990) found evidence supportive of the risk principle even though he did not, as we had done, report separate estimates of effect size for lower and higher risk cases exposed to variation in sanctions or treatment within particular studies (for example when separate effect size estimates could be derived for first offenders and repeat offenders within a particular study). Rather, Lipsey coded aggregated or average level of penetration of the justice system by all subjects within a particular study, and still concluded that there was at least minimal evidence supportive of the risk principle.

Surprisingly too, upon reanalysis of our databank, we too found a clear tendency for appropriate intervention to be most powerful in higher as opposed to lower risk samples. For example, in 51 tests of appropriate treatment delivered to higher risk cases the mean effect was .32 compared with only .06 in 3 tests with cases who were lower risk on the aggregate measure of risk. In our forthcoming expanded meta-analysis, the corresponding values are .26 (78 tests of appropriate treatment with high risk cases) and .10 (in 8 tests with low risk cases defined by the aggregate sample method).

Although some still complain about the risk principle, the evidence continues to accrue, with the issue of success with the highest risk egocentric cases (e.g., psychopaths) remaining an open question.

Criminogenic Need Principle

Criminogenic factors refer to dynamic risk factors. These represent promising intermediate targets in a service program when there is evidence that change will be followed by reduced recidivism. While the

research on these points is weak relative to risk assessment, the following are promising targets for change (Andrews 1989; Andrews & Bonta 1994):

- * changing antisocial attitudes
- * changing / managing antisocial feelings
- * reducing antisocial peer associations
- * promoting familial affection / communication
- * promoting familial monitoring and supervision
- * promoting child / family protection (preventing neglect/Abuse)
- * promoting identification/association with antirriminal role models
- * increasing self-control, self-management and problem solving skills
- * replacing the skills of lying, stealing and aggression with more prosocial alternatives
- * reducing chemical dependencies and substance abuse
- * shifting the density of the personal, interpersonal and other rewards and costs for criminal and noncriminal activities in familial, academic, vocational, recreational and other behavioural settings, so that the noncriminal alternatives are favored
- * providing the chronically psychiatrically troubled with low pressure, sheltered living arrangements and/or effective medication (risk is greatest during periods of active psychosis)

- * insuring that the client is able to recognize risky situations, and has a concrete and well rehearsed plan for dealing with those situations.

- * confronting the personal and circumstantial barriers to service (client motivation; background stressors with which clients may be preoccupied)

- * changing other attributes of clients and their circumstances that, through individualized assessments of risk and need, have been linked reasonably with criminal conduct

The less promising targets are as follows:

- * increasing self-esteem (without simultaneous reductions in antisocial thinking, feeling and peer associations)

- * focusing on vague emotional/personal complaints that have not been linked with criminal conduct

- * increasing the cohesiveness of antisocial peer groups

- * improving neighborhood-wide living conditions, without touching the criminogenic needs of higher risk individuals and families

- * showing respect for antisocial thinking on the grounds that the values of one culture are as equally valid as the values of another culture (no culture but a criminal culture values harming others)

- * increasing conventional ambition in the areas of school and work without concrete assistance in realizing these ambitions

- * attempting to turn the client into a "better person," when the standards for being a "better person" do not link with recidivism.

Within the psychology of criminal conduct, the primary targets are considered to be antisocial attitudes, cognitions and emotions, antisocial associates, and dynamic aspects of personality /skills such as weak

problem solving and self-control. These are the risk factors represented in the immediate situation of action where the personal and interpersonal factors may contribute to shifts in balance of rewards and costs, and/or to an "intention," "choice," or a "definition of the situation" or "self-efficacy belief" favorable to crime." To develop and maintain these favorable attitudes, associations, and skills, however, it is useful to enhance levels of reward and satisfaction (and to reduce costs) for anticriminal alternative behavior in the settings of home, school, work and recreation.

Responsivity

We have already seen in Section 1 that behavioral / cognitive behavioral / and social learning styles of service yielded larger and more positive effect size estimates than did the alternatives. These alternatives included variations on themes of official punishment, non-directive client-centred counselling, psychodynamic approaches, and any group approaches that fail to introduce concrete alternatives to antisocial styles of thinking, feeling and acting.

Rather than restate the principles of social learning, a characterization of effective counselling developed in the 1970s is summarized below:

- * Quality of the interpersonal relationship between offender and worker: generally people learn more from and are more greatly influenced by others who are respectful, caring, concerned, interested, interesting, enthusiastic and engaged. In social learning terms, these supervisors have available high quality reinforcers, their expressions of disapproval function as high quality costs, and they make more effective models (their behavior is more likely to be imitated, and their suggestions more likely to be tried out). In brief, it is simply counter to the psychology of human behaviour to expect high levels of interpersonal influence in the absence of open, warm and interesting communication.

- * A major role for correctional workers is the modelling and reinforcement of anticriminal alternatives to antisocial styles of thinking, feeling and acting. Here the supervisors, workers and

potentially even citizen volunteers provide the valuable service often missing in the offender's environment.

- * Concrete assistance often takes the form of concrete problem solving efforts with the offender, and/or advocacy and brokering activity with other community settings.

- * Authority can be influential when exercised with respect, with explanation (giving reasons), with guidance on how to comply, and in a firm but fair manner. Overall, the authority figure would want to communicate that compliance is possible and that the offender can succeed: Failure is avoidable and compliance will be rewarded! One of the few conditions under which deterrence works is the condition under which defiance is avoided through respectful guidance toward compliance. The child developmental literature reminds us of the importance of differentiating between rules and requests. It is best to reserve sanctions for situations in which rules are involved. Best too when the heavy sanctions (the "doomsday" contingencies which remove the offender from community control) are reserved for serious and immediate risk. Finally, there is no evidence from the meta-analyses of effective treatment that mandated intervention interferes with the success of intervention.

There are also more specific responsivity considerations. Style of communication may be very important in the context of corrections, and particularly in interaction with type of offender. Interpersonally anxious offenders do not respond well to highly confrontational and critical interpersonal exchanges, while the less anxious offender can respond as long as there is the background condition of caring and respect. Obviously, the less verbally gifted and cognitively immature offender will not pick up on highly verbal and analytic approaches to interpersonal influence. Similarly, the less empathic, less interpersonally sensitive offender may not be expected to respond to subtle cues and suggestions. Generally, in fact, it is best for communication to be concrete and direct. Andrews,

Bonta and Hoge (1990) extend specific responsivity considerations to include psychopathy, sensation-seeking, motivation, social support for

service, case management strategies, mental disorder, and age, gender and ethnicity.

Finally, the importance of therapeutic integrity was suggested in Section 1. The importance of structured follow-ups will soon become available through evaluations of relapse prevention programs. Professional discretion remains important. A sensitive and informed professional is assumed if the principles of effective treatment service are to be implemented in decent, humane and efficient ways.

The seminar for which these notes are a companion reviews in detail the objections to the conclusions drawn. In brief, however, it strains credibility to assert that risk of recidivism can not be established at levels well above chance, that human service works best for low risk cases who would do as well without service, that the best services are those that focus upon targets irrelevant to crime, and that the best services employ styles and modes poorly matched with the learning styles of clients.

Current knowledge is summarized in Table 2, but I look forward to the explosion of knowledge that may occur over the next five years.

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Table 1

CONTROLLED STUDIES OF CORRECTIONAL TREATMENT (EXCLUDING STUDIES
OF OFFICIAL PUNISHMENT) REPORTING POSITIVE EFFECTS

KIRBY (1954)	3/4	75%
BAILEY (1966)	13/22	60%
LOGAN (1972)	9/18	50%
	14/18	78%
ANDREWS (1974)	19/33	58%
PALMER (1975)	39/82	48%
GENDREAU & ROSS (1979)	82/95	86%
ANTONOWICZ & ROSS (in press)	20/44	45%
ANDREWS ET AL. (1990)	49/124	40%
*LAB & WHITEHEAD (1988)	40/85	47%
*LIPSEY (1990)	285/443	64%

* WITHOUT EXCLUDING STUDIES OF THE EFFECTS OF VARIATION IN CRIMINAL
SANCTIONS

TABLE 2

INDICATORS OF EFFECTIVE PROGRAMS

- * AN EMPIRICALLY-VALIDATED THEORY UNDERLYING THE INTERVENTION
- * TRAINED AND CLINICALLY SUPERVISED SERVICE DELIVERERS
- * PRINTED TRAINING / PROGRAM MANUALS
- * CRIMINOGENIC FACTORS ADDRESSED
- * USES CONCRETE COGNITIVE BEHAVIOURAL APPROACHES
- * MATCHING ACCORDING TO RESPONSIVITY
- * STRUCTURED FOLLOW-UP
- * WORKERS ARE ENTHUSIASTIC AND ENGAGED
- * WORKERS ARE ABLE TO HANDLE THEIR AUTHORITY WITHOUT DOMINATION/ABUSE
- * WORKERS ARE ABLE TO RECOGNIZE ANTISOCIAL THINKING, FEELING AND ACTING, AND ARE ABLE TO DEMONSTRATE AND REINFORCE CONCRETE ALTERNATIVES
- * WORKERS ARE PREDISPOSED TO OFFER CONCRETE PROBLEM SOLVING AND TO ENGAGE IN SKILL BUILDING.