

**Risk-Need-Responsivity
Model for Offender
Assessment and
Rehabilitation**

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Abstract

Developed in the 1980s and first formalized in 1990, the risk-need-responsivity model has been used with increasing success to assess and rehabilitate criminals in Canada and around the world. As suggested by its name, it is based on three principles: 1) the *risk principle* asserts that criminal behaviour can be reliably predicted and that treatment should focus on the higher risk offenders; 2) the *need principle* highlights the importance of criminogenic needs in the design and delivery of treatment; and 3) the *responsivity principle* describes how the treatment should be provided.

This paper summarizes the role of the principles in the development of risk assessment instruments. It also explains why some interventions work and others do not.

Introduction

The Risk-Need-Responsivity (RNR) model is perhaps the most influential model for the assessment and treatment of offenders (Blanchette & Brown, 2006; Ward, Mesler & Yates, 2007). First formalized in 1990 (Andrews, Bonta & Hoge), the RNR model has been elaborated upon and contextualized within a general personality and cognitive social learning theory of criminal conduct (Andrews & Bonta, 2006).

Since 1990, a number of principles have been added to the core theoretical principles to enhance and strengthen the design and implementation of effective interventions. These additional principles describe, for example, the importance of staff establishing collaborative and respectful working relationships with clients and correctional agencies and managers providing policies and leadership that facilitate and enable effective interventions (Andrews, 2001; Andrews & Bonta, 2006; Andrews & Dowden, in press). Although we should not lose sight of the full set of principles (we will say a bit more about them at the end of the paper) our focus here will be with the core principles of risk, need and responsivity.

Briefly, the three core principles can be stated as follows:

Risk principle: Match the level of service to the offender's risk to re-offend.

Need principle: Assess criminogenic needs and target them in treatment.

Responsivity principle: Maximize the offender's ability to learn from a rehabilitative intervention by providing cognitive behavioural treatment and tailoring the intervention to the learning style, motivation, abilities and strengths of the offender.

There are two parts to the responsivity principle: general and specific responsivity. General responsivity calls for the use of cognitive social learning methods to influence behaviour. Cognitive social learning strategies are the most effective regardless of the type of offender (i.e., female offender, Aboriginal offender, psychopath, sex offender). Core correctional practices such as prosocial modeling, the appropriate use of reinforcement and disapproval, and problem solving (Dowden & Andrews, 2004) spell out the specific skills represented in a cognitive social learning approach.

Specific responsivity is a "fine tuning" of the cognitive behavioural intervention. It takes into account strengths, learning style, personality, motivation, and bio-social (e.g., gender, race) characteristics of the individual.

This paper summarizes how the RNR model has influenced development of offender risk assessment instruments and offender rehabilitation programs. In so doing, we provide a summary of the evidence that demonstrates how the criminal behaviour of offenders can be predicted in a reliable, practical and useful manner. We also provide evidence of how rehabilitation programs can produce significant reductions in recidivism when these programs are in adherence with the RNR model.

A brief history of risk assessment

First generation: Professional judgement

For much of the first half of the twentieth century, the assessment of offender risk was left in the hands of correctional staff (i.e., probation officers and prison staff) and clinical professionals (i.e., psychologists, psychiatrists and social workers). Guided by their own professional training and experience, staff would make judgements as to who required enhanced security and supervision. The assessment of risk was a matter of professional judgement.

Second generation: Evidence-based tools

Beginning in the 1970s there was a growing recognition that the assessment of risk needed to depend more upon actuarial, evidence-based science and less on professional judgement. Actuarial risk assessment instruments consider individual items (e.g., history of substance abuse) that have been demonstrated to increase the risk of reoffending and assign these items quantitative scores. For example, the presence of a risk factor may receive a score of one and its absence a score of zero. The scores on the items can then be summed – the higher the score, the higher the risk that the offender will reoffend.

Some notable examples of the actuarial risk assessment scales that were developed during this period are the Salient Factor Score developed in the United States (Hoffman & Beck, 1974) and the Statistical Information on Recidivism scale developed for the Correctional Service of Canada (Nuffield, 1982). These risk assessment instruments are still used today and new ones continue to be developed (Copas & Marshall, 1998).

Before long it became clear that these actuarial risk assessment instruments were better at predicting criminal behaviour than professional judgement. Research reviews repeatedly showed that actuarial instruments performed better than clinical or professional judgement when making predictions of human behaviour (Ægisdóttir, White, Spengler et al., 2006; Andrews, Bonta & Wormith, 2006; Grove, Zald, Lebow, Snitz Nelson, 2000). The superiority of actuarial prediction has been extended to such diverse offender groups as mentally disordered offenders (Bonta, Law & Hanson, 1998) and sex offenders (Hanson & Bussière, 1998). As a consequence of the predictive superiority of actuarial risk assessments, more and more correctional jurisdictions adopted this type of assessment for classifying offenders and assigning differential supervision practices.

The period between 1970 and 1980 saw a movement from what Bonta (1996) called first generation assessment (i.e., professional judgements of risk) to second generation assessment (i.e., actuarial assessment of risk).

Second generation, actuarial risk assessment instruments have demonstrated satisfactory results; they can reliably differentiate lower risk offenders from higher risk offenders. However, second generation actuarial instruments have two characteristics that present major shortcomings. First, the second generation risk assessment instruments are atheoretical. The items that create these instruments are chosen simply because they are easily available and show an association with recidivism. The items are not chosen because they are theoretically relevant. Thus, the majority of the items are criminal history items – the type of information that correctional systems are quite efficient at collecting and distributing.

The second characteristic of second generation instruments is that the non-criminal history items that sample behaviour also tend to be of a historical nature (e.g., history of drug abuse). Criminal history and other factors that sample past behaviour are treated as static, immutable risk factors. This poses a major shortcoming for second generation risk assessment because the scales do not account for offenders changing for the better. Rather, the possibilities are: a) an individual's risk level does not change (if one scored positive for a history of drug abuse that risk factor will always remain no matter if he/she has learned to abstain from drugs, or b) an individual's risk increases (e.g., new offences are committed and criminal history scores increase). There is no possibility for diminished risk (to be fair, some of the second generation instruments do have items that can account for some diminished risk, however the number of items represent a minority of items in these risk scales).

Third generation: Evidence-based and dynamic

Recognizing the limitations of second generation risk assessment, research began to develop in the late 1970s and early 1980s on assessment instruments that included dynamic risk factors (Bonta & Wormith, 2007). Criminal history items remained an important feature of the third generation, risk assessment instruments, as they should. However, in addition to items on criminal history and other static items such as past substance abuse there were dynamic items investigating the offender's current and ever changing situation. Questions were asked about present employment (after all, one can lose a job or find a job), criminal friends (one can make new friends and lose old friends), family relationships (supportive or unsupportive), etc. The third generation risk instruments were referred to as "risk-need" instruments and a few of these were also theoretically based (e.g., the Level of Service Inventory-Revised; Andrews & Bonta, 1995).

Third generation risk instruments were sensitive to changes in an offender's circumstances and also provided correctional staff with information as to what needs should be targeted in their interventions. There is now evidence that changes in the scores on some of these risk-need instruments are associated with changes in recidivism (Andrews & Robinson, 1984; Arnold, 2007; Motiuk, Bonta & Andrews, 1990; Raynor, 2007; Raynor, Kynch, Roberts & Merrington, 2000). Evidence of dynamic validity, that is, changes in risk scores signal changes in the likelihood of committing a new offence, is immensely important for correctional programs and the staff charged with managing offender risk. The third generation risk-need instruments offer a way of monitoring the effectiveness, or ineffectiveness, of programs and supervision strategies. Furthermore, because dynamic risk factors (e.g., substance abuse, employment, companions) are embedded in third generation instruments correctional staff can be guided in directing intervention to these dynamic risk factors. Successfully addressing these dynamic risk factors would contribute to an offender's reduction in risk (Bonta, 2002).

Fourth generation: Systematic and comprehensive

To complete the story of offender risk scale development, the last few years has seen the introduction of fourth generation, risk assessment instruments. These new risk assessment instruments integrate systematic intervention and monitoring with the assessment of a broader range of offender risk factors heretofore not measured and other personal factors important to treatment (Andrews, Bonta & Wormith, 2006). An example of a fourth generation risk assessment instrument is the Level of Service/Case Management Inventory (LS/CMI; Andrews, Bonta & Wormith, 2004).

What is notable in this history is that third and fourth generation risk assessment instruments would not have been possible without the risk-need-responsivity model of offender assessment and rehabilitation.

Risk-need-responsivity model and offender risk assessment

The risk principle states that offender recidivism can be reduced if the level of treatment services provided to the offender is proportional to the offender's risk to re-offend. The principle has two parts to it: 1) level of treatment and, 2) offender's risk to re-offend. We will reserve our discussion of offender treatment for later but here we focus on the offender's risk to re-offend.

As we reviewed earlier, criminal behaviour can be predicted in a reliable manner beyond specialized training and experience (the actuarial versus professional judgement debate). We also know that with the third and fourth generation of risk assessment instruments our ability to predict improves with reassessment (Andrews et al., 2006). If one of our correctional goals is to reduce offender recidivism then we need to ensure that we have a reliable way of differentiating low risk offenders from higher risk offenders in order to provide the appropriate level of treatment. Today, we have the assessment technology to make distinctions among offenders with different probabilities of re-offending (Campbell, French & Gendreau, 2007).

The need principle calls for the focus of correctional treatment to be on *criminogenic needs*. Criminogenic needs are dynamic risk factors that are directly linked to criminal behaviour. Criminogenic needs can come and go unlike static risk factors that can only change in one direction (increase risk) and are immutable to treatment intervention. Offenders have many needs deserving of treatment but not all of these needs are associated with their criminal behaviour. These criminogenic needs are subsumed under the major predictors of criminal behaviour referred to as "central eight" risk/needs factors (Andrews & Bonta, 2006; Andrews et al., 2006).

Table 1 presents an overview of the major risk/need factors along with some less promising targets for interventions (i.e., non-criminogenic needs) and suggestions for assessment and treatment. The seven major risk/need factors are part of the central eight (criminal history completes the list but it is a static risk factor). These seven criminogenic needs are worth assessing and targeting in interventions. To further illustrate the distinction between the two types of needs let us examine procriminal attitudes which are labelled criminogenic. Shifting attitudes through treatment from the procriminal to the prosocial will lead to less criminal behaviour and more prosocial behaviour (what you think influences how you behave). However, increasing self-esteem without changes in procriminal attitudes runs the risk of resulting in confident criminals. Decreasing self-esteem may lead to miserable criminals. The probability of criminal behaviour may or may not change as a function of self-esteem.

In terms of offender assessment, the need principle requires the assessment of criminogenic needs/dynamic risk factors. As we have already pointed out, third and fourth generation risk instruments do just that.

Finally, we have the responsivity principle. General responsivity refers to the fact that cognitive social learning interventions are the most effective way to teach people new behaviours regardless of the type of behaviour. Effective cognitive social learning strategies operate according to the following two principles:

- 1) the relationship principle (establishing a warm, respectful and collaborative working alliance with the client) and,

Table 1. The seven major risk/need factors along with some minor risk/need factors

Major risk/need factor	Indicators	Intervention goals
Antisocial personality pattern	Impulsive, adventurous pleasure seeking, restlessly aggressive and irritable	Build self-management skills, teach anger management
Procriminal attitudes	Rationalizations for crime, negative attitudes towards the law	Counter rationalizations with prosocial attitudes; build up a prosocial identity
Social supports for crime	Criminal friends, isolation from prosocial others	Replace procriminal friends and associates with prosocial friends and associates
Substance abuse	Abuse of alcohol and/or drugs	Reduce substance abuse, enhance alternatives to substance use
Family/marital relationships	Inappropriate parental monitoring and disciplining, poor family relationships	Teaching parenting skills, enhance warmth and caring
School/work	Poor performance, low levels of satisfactions	Enhance work/study skills, nurture interpersonal relationships within the context of work and school
Prosocial recreational activities	Lack of involvement in prosocial recreational/leisure activities	Encourage participation in prosocial recreational activities, teach prosocial hobbies and sports
<hr/>		
Non-criminogenic, minor needs	Indicators	
Self-esteem	Poor feelings of self-esteem, self-worth	
Vague feelings of personal distress	Anxious, feeling blue	
Major mental disorder	Schizophrenia, manic-depression	
Physical health	Physical deformity, nutrient deficiency	

- 2) the structuring principle (influence the direction of change towards the prosocial through appropriate modeling, reinforcement, problem-solving, etc.).

Whether the goal is to control smoking, rid one of depressive thoughts, develop good study habits, get along with one's employer or replace criminal behaviour and cognitions with prosocial behaviours and cognitions, cognitive social learning intervention is the preferred treatment method (Andrews & Bonta, 2006).

Specific responsivity calls for treatment interventions to consider personal strengths and socio-biological-personality factors. Treatment should then be tailored to these factors, as they have the potential to facilitate or hinder treatment.

The essence of this principle is that treatment can be enhanced if the treatment intervention pays attention to personal factors that can facilitate learning. Most have heard the pedagogical advice that one must vary teaching methods to suit visual learners and auditory learners. Offender treatment programs involve teaching offenders new behaviours and cognitions and to maximize this learning experience requires attention not only to whether the offender is a visual learner or an auditory learner but a whole range of personal-cognitive-social factors.

Treatment providers may need to first deal with an individual's debilitating anxiety or mental disorder in order to free the individual to attend and participate fully in a program targeting criminogenic needs. If the offender has limited verbal skills and a concrete thinking style then the program must ensure that abstract concepts are kept to a minimum and there is more behavioural practice than talking.

Increasing motivation and reducing barriers to attending treatment must be well thought-out. This may be particularly important for women offenders (e.g., provide child care so the mother can attend treatment) and for Aboriginal offenders (e.g., include elders and spiritual ceremonies along with structured cognitive behavioural treatment). Again, offender assessment should involve a sampling of these responsivity factors (the LS/CMI, fourth generation assessment instrument, actually has a separate section on responsivity).

Before we draw this section to an end, we would like to make a very important point that is sometimes lost among researchers in the offender assessment field. Good offender assessment is more than making decisions on level of risk. If one only cared about differentiating low risk from high risk offenders so that the high risk offender can be controlled through incapacitation or strict monitoring then second generation risk scales can suffice. However, in our view, this is short-sighted as it largely ignores the fundamental human condition of change. At the same time it has the potential of violating our sense of fairness. Offenders, like all human beings, are always changing their behaviours as a consequence to environmental demands and through their own deliberate, autonomous, self-directed change. By adhering to the need and responsivity principles through the assessment of criminogenic needs and responsivity factors we acknowledge that change is an important aspect of life and behavioural change can be facilitated by the appropriate intervention. As we will see in the next section, assessments of risk, criminogenic needs and responsivity all figure largely in effective offender treatment.

Offender rehabilitation

Brief history of offender rehabilitation

For a long time there has been evidence that some interventions can reduce recidivism. In 1954, Kirby found four studies evaluating correctional counselling – yes, only four. The studies compared offenders receiving treatment to offenders who had no treatment. He found that three of the studies demonstrated lower recidivism rates for the group who received treatment. However, subsequent reviews unearthed more and more controlled evaluations of correctional treatment and these reviews found that, in approximately 50 to 60% of the studies, treatment was effective (Bailey, 1966; Logan, 1972).

Throughout the 1950s and 1960s, rehabilitation was seen as a promising approach to reducing recidivism. Although earlier reviews found that treatment does not “work” in half of the studies, the bottle was seen as half full. Then in the 1970s the bottle was placed upside down by the review of Robert Martinson and his colleagues (Lipton, Martinson & Wilks, 1975; Martinson, 1974). Martinson undertook a major review of over 230 evaluations of offender “treatment” (we place quotation marks around the word treatment as Martinson took a very liberal definition of what constituted treatment). They found, like the reviewers before them, that approximately 50 to 60% of studies supported the effectiveness of treatment. However, this time the conclusion was “nothing works”.

The “nothing works” movement seized criminal justice, particularly in the United States. If offenders could not be rehabilitated then what was society to do with the problem of crime. Many answered that punishment or deterrence could reduce criminal behaviour. Thus began the “get tough” movement. However, after 30 years of experimentation with getting tough not only have prison and probation populations skyrocketed but the weight of the evidence is that deterrence has had hardly any impact on offender recidivism and in some situations, actually increased recidivism (see chapter 11 of Andrews & Bonta, 2006; Pogarsky & Piquero, 2003; Pratt & Cullen, 2005; Smith, Goggin & Gendreau, 2002; Villettaz, Killias, & Zoder, 2006; von Hirsch, Bottoms, Burney, & Wikström, 1999).

The one good thing that came out of the “nothing works” ideology was that researchers became more rigorous in their evaluations of treatment and some researchers developed a theoretical model to explain why some interventions were effective and others were not (e.g., Andrews, Zinger, Hoge, Bonta, Gendreau & Cullen, 1990).

The RNR model and offender rehabilitation

Recall that the risk principle has two components. The first part emphasizes the importance of reliably predicting criminal behaviour and thus, the need for evidence-based risk instruments. The second component highlights the need to properly match the level of service to the offender’s risk level. That is, as risk level increases then the amount of treatment needed to reduce recidivism also increases. To the reader, this may appear to be common sense – higher risk offenders have more criminogenic needs than lower risk offenders and therefore more intervention is needed to address these needs. However, in everyday practice there is a tremendous pressure to focus resources on lower risk offenders. After all, low risk offenders are more cooperative and motivated to comply with treatment demands than high risk offenders.

Inappropriate matching of treatment intensity with offender risk level can lead to wasted treatment resources and in some situations actually make matters worse. Note in Figure 1 that treatment services provided to high risk offenders show lower recidivism compared to treatment provided to low risk offenders. In fact, in 374 tests of the risk principle, treatment delivered to high risk offenders was associated with an average 10% difference in recidivism (Andrews & Dowden, 2006).

Figure 1. Treatment effectiveness as a function of adherence to the risk principle

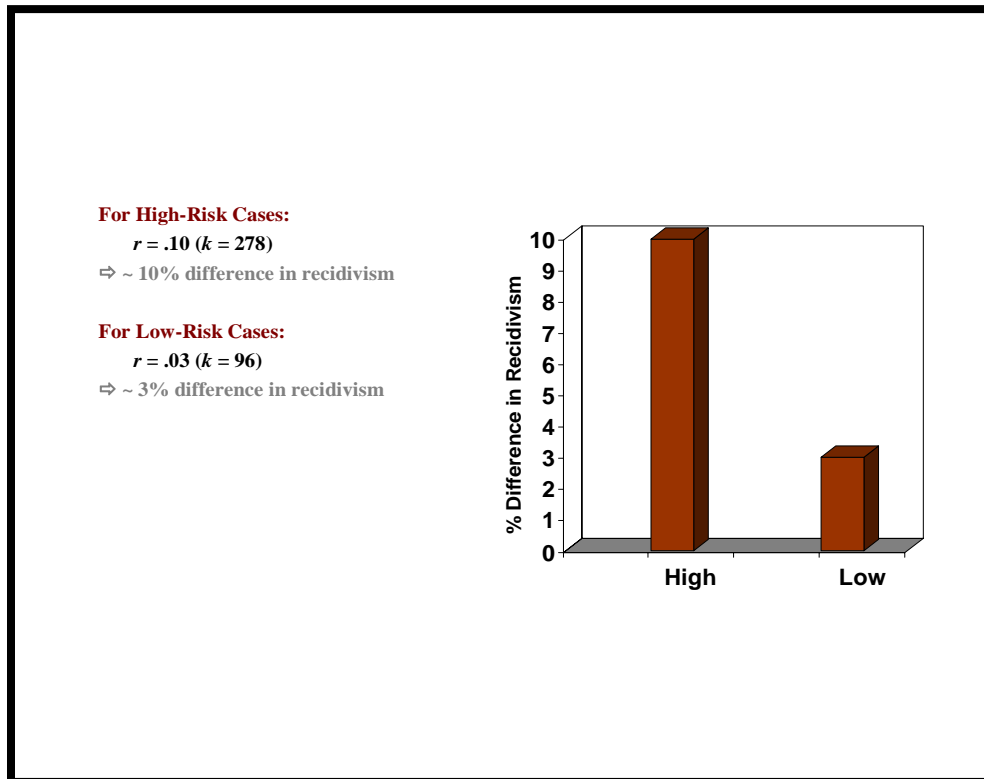
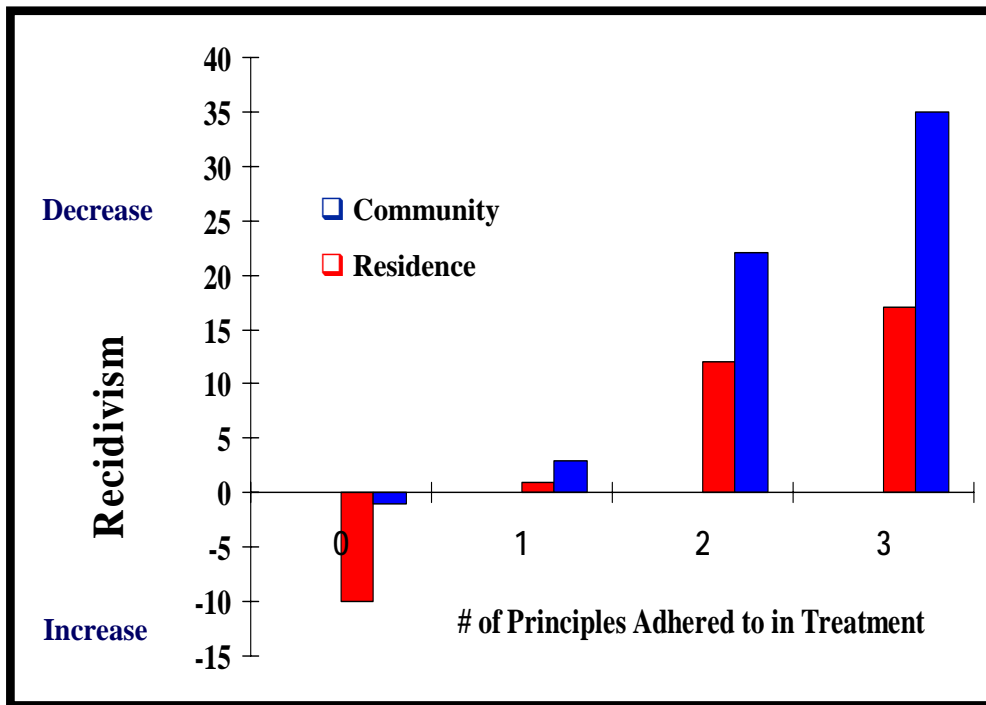


Figure 1 also demonstrates that providing treatment to low risk offenders is associated with a very mild effect (about a 3% reduction in recidivism; Andrews & Bonta, 2006). Figure 1 summarizes the research on providing any treatment to offenders as a function of risk. However, there are a few studies that show how providing *intensive* services to low risk offenders may actually increase criminal behaviour and also that these services can lead to a significant decrease in recidivism when delivered to higher risk offenders. For example, Bonta, Wallace-Capretta and Rooney (2000) in an evaluation of a Canadian program found that low risk offenders who received minimal levels of treatment had a recidivism rate of 15% and low risk offenders who received intensive levels of services had more than double the recidivism rate (32%). In the same study, the high risk offenders who did not receive any intensive treatment services had a recidivism rate of 51% but the high risk offenders who did receive intensive services had almost half the recidivism rate (32%). The risk principle calls for intensive treatment services to be reserved for the higher risk offender.

Can we achieve reductions in recidivism beyond 10% by limiting ourselves to respecting the risk principle? What happens when we include the need and responsivity principles? The risk principle speaks of *who* should be treated (the higher risk offender), the need principle speaks to *what* should be treated (criminogenic needs) and the responsivity principle helps determine *how* to treat.

Based on tests of the need principle, successfully addressing criminogenic needs is associated with an average 19% difference in recidivism. Treatments that focus on non-criminogenic needs are associated with a slight increase in recidivism (about 1%; p. 334 of Andrews & Bonta, 2006). If we examine only adherence to the general responsivity principle (i.e., use cognitive behavioural methods of intervention) we find on average, a 23% difference in recidivism (Andrews & Bonta, 2006). Finally, when offender treatment programs put all three principles into action then the effectiveness of correctional treatment can be quite significant. Figure 2 shows the accumulating effectiveness of treatment when there is increased adherence to the risk-need-responsivity principles.

Figure 2. Adherence to the RNR principles by setting



(Adapted from Andrews & Bonta, 2006)

Treatment interventions that do not adhere to any of the three principles (that is, they target the non-criminogenic needs of low risk offenders using non-cognitive-behavioural techniques) are actually criminogenic! This situation is particularly exacerbated when the treatment is given in residential/custodial settings (we presume because the offender cannot escape from the well-intentioned but poorly designed treatment). However, if a treatment intervention begins to adhere to one of the principles we start to see reductions in recidivism and when all three principles are evident in a rehabilitation program then we see average recidivism differences between the treated and non-treated offenders of 17% when delivered in residential/custodial settings and 35% when delivered in community settings. Treatment can work in residential and custodial settings but effectiveness is maximized when the treatment is in a community setting.

To have a 17 and 35% point differences in recidivism may not seem like much. Some may ask why the figures are not higher. Why not 40 or 50 or even 100%? Besides answering that a complete reduction in recidivism or a “total cure” is an unrealistic goal, let us examine the 15-35% success rate in relation to other widely acceptable success rates (Table 2). As presented in Table 2, offender treatment programs that adhere to the principles of risk, need and responsivity measure up quite well to the police’s ability to clear a crime and even some common medical interventions.

Table 2. Comparative effectiveness for selected interventions

Intervention	Target	Success rate
Criminal justice		
Police clearance rates	Break and enter	0.16
	Auto theft	0.12
Offender treatment (RNR)	Recidivism	0.29
Medical interventions		
Aspirin	Cardiac event	0.03
Chemotherapy	Breast cancer	0.11
Bypass surgery	Cardiac event	0.15

(Sources: Andrews & Bonta, 2006; Fedorowycz, 2004; Lipsey & Wilson, 1993)

Generality of the RNR model

The General Personality and Cognitive Social Learning (GPCSL) perspective of criminal behaviour (Andrews & Bonta, 2006) fundamentally reflects a personality predisposition and the learning of criminal behaviour governed by the expectations an individual holds and the actual consequences to his or her behaviour. Behaviour that is rewarded or that the individual expects will be rewarded is likely to occur and behaviour that is punished or is expected to be punished is unlikely to occur.

Criminal behaviour is likely when the rewards and costs for crime outweigh the rewards and costs for prosocial behaviour. Rewards and costs can be delivered by others (e.g., family, friends, teachers, employers and co-workers), they can be produced from within (e.g., feelings of pride and shame) and sometimes they arise automatically from the behaviour itself (e.g., a feeling of relaxation after ingesting a drug or the feeling of excitement when breaking into a house).

The GPCSL perspective underlies the RNR model of offender assessment and rehabilitation. When we conduct risk assessments we are essentially sampling the rewards and costs associated with criminal conduct. Does the individual have criminal friends? If so, then we know that the individual likely receives rewards and encouragement for criminal behaviour. Does the individual like his/her job and the people with whom he or she works? If so, then we know that rewards are available for prosocial behaviour. We can go further and dissect GPCSL in order to construct the links to RNR.

1. General personality

With respect to criminal behaviour, we refer specifically to an antisocial personality pattern. Antisocial personality pattern is not limited to the psychiatric diagnostic category of Antisocial Personality Disorder or the forensic label of psychopathy. It is more comprehensive and captures the history of generalized rule violation and trouble, some of the personality factors that function as criminogenic needs (e.g., impulsivity, self-centeredness) and responsivity factors (e.g., need for excitement, shallow affect).

2. Cognitive

The cognitive aspect of the theory includes deliberate self-conscious self-regulation and automatic self-regulation and points to the importance of procriminal attitudes, values and beliefs as causes to criminal behaviour.

3. Social learning

This part of GPCSL highlights the importance of learning within the social context of friends, family, school, work and leisure. Assessments of the rewards and costs for criminal and prosocial behaviour within these social contexts along with automatic rewards and costs associated with some behaviours (e.g., drug use) provide a comprehensive survey of criminogenic needs and strengths. An assessment of what is referred to as the “central eight” (Andrews & Bonta, 2006; Andrews et al., 2006) then lays the foundation for effective intervention by directing services to those risk factors linked to criminal behaviour.

The GPCSL perspective, at the broadest level, speaks to an understanding of human behaviour. Thus, the GPCSL perspective and the subsumed RNR model are expected to be relevant across a range of offenders. For the most part, and with some minor exceptions, the evidence suggests that the RNR model of assessment and treatment can be applied to women offenders (Blanchette & Brown, 2006; Dowden & Andrews, 1999a), mentally disordered offenders (Andrews, Dowden & Rettinger, 2001; Bonta et al., 1998), the extremely poor and those without financial problems (Andrews et al., 2001), young offenders (Dowden & Andrews, 1999b), sex offenders (Hanson, 2006; Hanson & Bourgon, 2007) and Aboriginal offenders (Rugge, 2006). The RNR model is robust indeed.

Summary and conclusions

During the past 20 years there has been tremendous progress in our ability to reliably differentiate offenders in terms of risk and to assist offenders with becoming more prosocial. Many of these positive developments have been greatly influenced by the formulation of the risk-need-responsivity model. This is not to say that other approaches to risk assessment and treatment have not made important contributions. There are, for example, many valid offender risk instruments that have been developed from a nontheoretical perspective using highly sophisticated psychometric methods (Campbell et al., 2007). The VRAG (Harris, Rice & Quinsey, 1993) and STATIC-99 (Hanson & Thornton, 1999) are stellar examples. However, very few of these risk instruments contribute to planning for effective intervention. The RNR model has not only contributed to the development of offender risk instruments that predict as well as the atheoretical, actuarial instruments but also provides information useful for offender treatment.

We do not mean to paint a rosy picture where all offenders can be perfectly assessed and successfully treated. We do not think that prediction will ever be perfect and that each and every offender can be treated and never offend again. Human behaviour is far too complex for our assessment instruments and treatment programs. We also recognize that some may object to our emphasis on criminogenic needs at the expense of non-criminogenic needs that may be particularly important to the individual's happiness. However, the RNR model does not exclude attention to personal levels of distress. As we have stated before (Bonta & Andrews, 2003), achieving personal satisfaction for offenders involves attention to both types of needs. However, by attending to criminogenic needs we benefit from improvements in the prediction and treatment of offenders. When offenders can be helped to move away from a criminal lifestyle that often brings anguish and misery to themselves, their loved ones and others to a prosocial lifestyle not only does the public gain but also the offender and those around him or her.

The greatest challenge is transferring the RNR model into "real world" settings. It is one thing for scientists to demonstrate that a risk instrument or a treatment program can work but it is a very different matter to make it work in correctional agencies with a diverse work force in terms of education, values and experience, conflicting criminal justice policies and management practices that are not conducive to selecting and training of staff in effective assessment techniques. We know that with time the assessments completed by staff become less accurate due to errors and there is a general drift in the integrity of assessments (Bonta, Bogue, Crowley & Motiuk, 2001; Lowenkamp, Latessa, & Holsinger, 2004). What we do not know enough of is how to maintain the assessment expertise of staff over extended periods of time.

We also know that when treatment programs that have demonstrated reduced recidivism in tightly controlled experiments are adopted by correctional agencies that their effectiveness is significantly diminished (Lipsey, 1999). Andrews and Bonta (2006, p. 368) reported that the effectiveness of treatment delivered in the real world is about half of the effect of the experimental, demonstration program. Despite this sobering finding we are also learning what is necessary to enhance the delivery of effective treatment services.

Table 3 expands the principles of effective offender assessment and treatment beyond the risk-need-responsivity principles. Although the table requires a lengthy discussion to be fully understood, we hope that this summary is sufficient to describe what we know about the factors that enhance our ability to reliably assess risk and provide interventions that reduce recidivism. A more thorough discussion of the complete set of principles is provided elsewhere (Andrews, 2001; Andrews & Bonta, 2006; Andrews & Dowden, in press).

Given the research to date, to provide the best assessments and interventions correctional agencies need to:

- a) embrace a general vision that it is in the best interest for all to provide cognitive behavioural services to offenders
- b) select, properly train, and supervise staff in the use of RNR assessments and the delivery of services that adhere to RNR
- c) provide policies and organizational supports for the RNR model

Agencies that are able to achieve this level of commitment show significant reductions in recidivism compared to agencies that fail to adhere to the risk-need-responsivity principles (Andrews & Dowden, 2005; Lowenkamp, 2004; Lowenkamp, Latessa & Smith, 2006). Obviously, there is still much work to do but the RNR gives us a roadmap of what must be done.

Table 3. The RNR model of offender assessment and rehabilitation

Principle	Statement
Overarching Principles	
Respect for the person	Services are provided in an ethical, legal, just, moral, humane, and decent manner
Theory	Use a general personality and cognitive social theory
Human service	Introduce human service delivery rather than relying on the severity of the penalty
Crime prevention	The theoretical and empirical base of RNR-based human service should be disseminated widely for purposes of enhanced crime prevention throughout the justice system and beyond (e.g., general mental health services)
RNR	
Risk	Match the level of service to the offender’s risk to re-offend.
Need	Assess criminogenic needs and target them in treatment.
Responsivity:	Maximize the offender’s ability to learn from a rehabilitative intervention by providing cognitive behavioural treatment and tailoring the intervention to the learning style, motivation, abilities and strengths of the offender.
General	Use cognitive social learning methods to influence behaviour.
Specific	Use cognitive behavioural interventions that take into account strengths, learning style, personality, motivation, and bio-social (e.g., gender, race) characteristics of the individual.
Structured assessment	
Assess RNR	Use structured and validated instruments to assess risk, need and responsivity.
Strengths	Assess personal strengths and integrate them in interventions.
Breadth	Assess specific risk/need/responsivity factors as well as non-criminogenic needs that may be barriers to prosocial change but maintain a focus on the RNR factors.
Professional discretion	Deviate from the RNR principles for specified reasons.

Program delivery

Dosage	Engage higher risk cases and minimize dropout from programs that adhere to RNR.
Staff practices:	
Relationship skills	Respectful, collaborative, caring staff that employ motivational interviewing (stages 1 and 2).
Structuring skills	Use prosocial modeling, the appropriate use of reinforcement and disapproval, cognitive restructuring, motivational interviewing (stages 3 – 6).

Organizational

Community-based	Services that adhere to RNR are more effective when delivered in the community although residential or institutional services that adhere to RNR can also reduce recidivism.
Continuity of service	Provision of services and ongoing monitoring of progress.
Agency management	Managers select and train staff according to their relationship and structuring skills, provide clinical supervision according to RNR, ensure that there are organizational mechanisms to maintain the monitoring, evaluation and integrity of assessments and programs.
Community linkages	The agency within which the program is housed will maintain positive relationships with other agencies and organizations.

References

- Ægisdóttir, S., White, M. J., Spengler, P. M. et al. (2006). The meta-analysis of clinical judgment project: Fifty-six years of accumulated research on clinical versus statistical prediction. *Counseling Psychologist*, *34*, 341-382.
- Andrews, D. A. (2001). Principles of effective correctional programs. In L. L. Motiuk & R. C. Serin (Eds.), *Compendium 2000 on effective correctional programming* (pp. 9-17). Ottawa: Correctional Services of Canada.
- Andrews, D. A., & Bonta, J. (1995). *The Level of Service Inventory - Revised*. Toronto: Multi-Health Systems.
- Andrews, D. A., & Bonta, J. (2006). *The psychology of criminal conduct* (4th ed.). Newark, NJ: LexisNexis.
- Andrews, D. A., Bonta, J., & Hoge, R. D. (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior*, *17*, 19-52.
- Andrews, D. A., Bonta, J., & Wormith, S. J. (2004). *The Level of Service/Case Management Inventory (LS/CMI)*. Toronto: Multi-Health Systems.
- Andrews, D. A., Bonta, J., & Wormith, S. J. (2006). The recent past and near future of risk and/or need assessment. *Crime and Delinquency*, *52*, 7-27.
- Andrews, D. A., & Dowden, C. (2005). Managing correctional treatment for reduced recidivism: A meta-analytic review of program integrity. *Legal and Criminological Psychology*, *10*, 173-187.
- Andrews, D. A., & Dowden, C. (2006). Risk principle of case classification in correctional treatment: A meta-analytic investigation. *International Journal of Offender Therapy and Comparative Criminology*, *50*, 88-100.
- Andrews, D. A., & Dowden, C. (in press). The Risk-Need-Responsivity model of assessment and human service in prevention and corrections: Rehabilitative jurisprudence. *Canadian Journal of Criminology and Criminal Justice*.
- Andrews, D. A., Dowden, C., & Rettinger, J. L. (2001). Special populations within corrections. In J. A. Winterdyk (Ed.), *Corrections in Canada: Social reactions to crime* (pp. 170-212). Toronto: Prentice-Hall.
- Andrews, D. A., & Robinson, D. (1984). *The Level of Supervision Inventory: Second report*. (Report to Research Services). Toronto: Ontario Ministry of Correctional Services.
- Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does correctional treatment work? A psychologically informed meta-analysis. *Criminology*, *28*, 369-404.
- Arnold, T. (2007). *Dynamic changes in the Level of Service Inventory-Revised (LSI-R) and the effects on prediction accuracy*. Unpublished Master's Dissertation, St. Cloud University, St. Cloud, Minnesota.

- Bailey, W. C. (1966). Correctional outcome: An evaluation of 100 reports. *Journal of Criminal Law, Criminology and Police Science*, 57, 153-160.
- Blanchette, K., & Brown, S. L. (2006). *The assessment and treatment of women offenders: An integrative perspective*. Chichester, England: John Wiley & Sons.
- Bonta, J. (1996). Risk-needs assessment and treatment. In A. T. Harland (Ed.), *Choosing correctional options that work: Defining the demand and evaluating the supply* (pp. 18-32). Thousand Oaks, CA: Sage.
- Bonta, J. (2002). Offender risk assessment: Guidelines for selection and use. *Criminal Justice and Behavior*, 29, 355-379.
- Bonta, J., & Andrews, D. A. (2003). A commentary on Ward and Stewart's model of human needs. *Psychology, Crime, and Law*, 9, 215-218.
- Bonta, J., Bogue, B., Crowley, M. & Motiuk, L. (2001). Implementing offender classification systems: Lessons learned. In G. A. Bernfeld, D. P. Farrington & A. W. Leschied (Eds.), *Offender rehabilitation in practice: Implementing and evaluating effective programs* (pp. 227-245). Chichester, England: Wiley.
- Bonta, J., Law, M., & Hanson, R. K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: A meta-analysis. *Psychological Bulletin*, 123, 123-142.
- Bonta, J., Wallace-Capretta, S. & Rooney, R. (2000a). A quasi-experimental evaluation of an intensive rehabilitation supervision program. *Criminal Justice and Behavior*, 27, 312-329.
- Bonta, J., & Wormith, S. J. (2007). Risk and need assessment. In G. McIvor & P. Raynor (Eds.), *Developments in social work with offenders* (pp. 131-152). Philadelphia, PA: Jessica Kingsley Publishers.
- Campbell, M. A., French, S., & Gendreau, P. (2007). *Assessing the utility of risk assessment tools and personality measures in the prediction of violent recidivism for adult offenders*. (User Report 2007-04). Ottawa, Ontario: Public Safety Canada.
- Copas, J., & Marshall, P. (1998). The Offender Group Reconviction Scale: the statistical reconviction score for use by probation officers. *Journal of the Royal Statistical Society, Series C*, 47, 159-171.
- Dowden, C., & Andrews, D. A. (1999a). What works for female offenders: A meta-analytic review. *Crime and Delinquency*, 45, 438-452.
- Dowden, C., & Andrews, D. A. (1999b). What works in young offender treatment: A meta-analysis. *Forum on Corrections Research*, 11, 21-24.
- Dowden, C., & Andrews, D. A. (2004). The importance of staff practices in delivering effective correctional treatment: A meta-analysis of core correctional practices. *International Journal of Offender Therapy and Comparative Criminology*, 48, 203-214.

- Fedorowycz, O. (2004). Breaking and entering in Canada – 2002. *Juristat*, 24, Ottawa: Canadian Centre for Justice Statistics.
- Grove, W. M., Zald, D. H., Lebow, B. S., Snitz, B. E., & Nelson, C. (2000). Clinical versus mechanical prediction: A meta-analysis. *Psychological Assessment*, 12, 19-30.
- Hanson, R. K. (2006). What works: The principles of effective interventions with offenders. Invited address to the 25th Annual Convention of the Association for the Treatment of Sexual Abusers, Chicago, September 29.
- Hanson, R. K., & Bourgon, G. (2007). A psychologically informed meta-analysis of sex offender treatment. Paper presented at the 68th Annual Convention of the Canadian Psychological Association, Ottawa, June 7.
- Hanson, R. K., & Bussière, M. T. (1998). Predicting relapse: A meta-analysis of sexual offender recidivism studies. *Journal of Consulting and Clinical Psychology*, 66, 348-362.
- Hanson, R. K., & Thornton, D. (1999). *Static-99: Improving actuarial risk assessments for sex offenders*. (User Report 1999-02). Ottawa: Public Safety Canada.
- Harris, G. T., Rice, M. E., & Quinsey, V. L. (1993). Violent recidivism of mentally disordered offenders: The development of a statistical prediction instrument. *Criminal Justice and Behavior*, 20, 315-335.
- Hoffman, P. B., & Beck, J. L. (1974) Parole decision-making: A Salient Factor Score. *Journal of Criminal Justice*, 2, 195-206.
- Kirby, B. C. (1954). Measuring effects of treatment of criminals and delinquents. *Sociology and Social Research*, 38, 368-374.
- Lipsey, M. W. (1999). Can rehabilitative programs reduce the recidivism of juvenile offenders? An inquiry into the effectiveness of practical programs. *Virginia Journal of Social Policy and the Law*, 6, 611-641.
- Lipsey, M. W., & Wilson, D. B. (1993). The efficacy of psychological, educational, and behavioural treatment: Confirmation from meta-analysis. *American Psychologist*, 48, 1181-1209.
- Lipton, D., Martinson, R. & Wilks, J. (1975). *The effectiveness of correctional treatment: A survey of treatment evaluation studies*. New York: Praeger.
- Logan, C. H. (1972). Evaluation research in crime and delinquency: A reappraisal. *Journal of Criminal Law, Criminology and Police Science*, 63, 378-387.
- Lowenkamp, C. T. (2004). *Correctional program integrity and treatment effectiveness: A multi-site, program-level analysis*. Unpublished doctoral dissertation, University of Cincinnati: Doctoral Dissertation.
- Lowenkamp, C. T., Latessa, E. J., & Holsinger, A. M. (2004). Empirical evidence on the importance of training and experience in using the Level of Service Inventory-Revised. *Topics in Community Corrections*, 49-53.

- Lowenkamp, C. T., Latessa, E. J., & Smith, P. (2006). Does correctional program quality really matter? The impact of adhering to the principles of effective intervention. *Criminology & Public Policy*, 5, 575-594.
- Martinson, R. (1974). What works? — Questions and answers about prison reform. *The Public Interest*, 35, 22-54.
- Motiuk, L. L., Bonta, J., & Andrews, D. A. (1990). *Dynamic predictive criterion validity in offender assessment*. Paper presented at the Canadian Psychological Association Annual Convention, Ottawa.
- Nuffield, J. (1982). *Parole decision-making in Canada*. Ottawa: Solicitor General of Canada.
- Pogarsky, G., & Piquero, A. (2003). Can punishment encourage offending? Investigating the “resetting” effect. *Journal of Research in Crime and Delinquency*, 40, 95-120.
- Pratt, T. C., & Cullen, F. T. (2005). Assessing macro-level predictors and theories of crime: A meta-analysis. In M. Tonry (Ed.), *Crime and justice: A review of research*. (Vol. 32), pp. 373-450. Chicago, IL: University of Chicago Press.
- Raynor, P. (2007) Risk and need assessment in British probation: The contribution of the LSI-R. *Psychology, Crime, and Law*, 13, 125-138.
- Raynor, P., Kynch, J., Roberts, C., & Merrington, S. (2000). *Risk and need assessment in probation services: an evaluation*. Home Office Research Study No. 211. London, England: Home Office.
- Rugge, T. (2006). *Risk assessment of male Aboriginal offenders: A 2006 perspective*. (User Report 2006-01). Ottawa, Ontario: Public Safety Canada.
- Smith, P., Goggin, C., & Gendreau, P. (2002). *The effects of prison sentences and intermediate sanctions on recidivism: General effects and individual differences*. (User Report 2002-01). Ottawa, Ontario: Public Safety Canada.
- Villettaz, P., Killias, M., & Zoder, I. (2006). *The effects of custodial vs. non-custodial sentences on re-offending: A systematic review of the state of the knowledge*. Report to the Swiss National Science Foundation and the Campbell Collaboration Crime and Justice Group. Institute of Criminology and Criminal Law, University of Lausanne: Lausanne, Switzerland.
- von Hirsch, A., Bottoms, A. E., Burney, E., & Wikström, P.-O. (1999). *Criminal deterrence and sentencing severity: An analysis of recent research*. Oxford, UK: Hart.
- Ward, T., Mesler, J., & Yates, P. (2007). Reconstructing the Risk-Need-Responsivity model: A theoretical elaboration and evaluation. *Aggression and Violent Behavior*, 12, 08-228.