RNR Model

The RNR Model of Offender Treatment : Is There Value for Community Corrections in Japan?

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Abstract

Canada, the United States and many western European countries have been struggling with how best to reduce offender recidivism. This has usually involved a combination of punishment and treatment. For many years there has been a reliance on punishment or the "get tough" approach to reduce recidivism. This approach has led to little success and recently criminal justice systems have been turning to rehabilitation approaches with the hope of achieving reductions in recidivism. The Risk-Need-Responsivity (RNR) model has become the premier paradigm for guiding the development and delivery of offender treatment programs. Although the RNR model is widely known in many parts of the world its familiarity in Japan is less wide-spread. This article describes the RNR model and its potential relevance to community corrections and the potential challenges of translating the model to the Japanese context.

Keywords : **Risk-Need-Responsivity (RNR) Model, criminogenic needs, offender treatment, STICS (Strategic Training Initiative in Community Supervision)**

I would like to thank Kei Someda for the invitation to write an article for the journal and his support in educating me on the Japanese community corrections system. The views expressed do not necessarily reflect those of Public Safety Canada. Correspondence concerning this article should be addressed to James Bonta at Jim.Bonta@ps.gc.ca.

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It is great honor and pleasure for me to write an article for the new Journal of the Japanese Association of Offenders Rehabilitation. I wish to congratulate the Japanese Association of Offenders Rehabilitation for publishing the Journal and signaling a new and exciting initiative in the scientific understanding and practical application of offender rehabilitation in Japan. I sincerely wish both the Association and the Journal success in their endeavors.

Before I begin, I wish to state that I am by no means an expert in the criminal justice system in Japan. I am certain that there are important differences in law and culture between Canada and Japan but I also would suggest that there are some similarities that would allow me to describe how the Risk-Need-Responsivity (RNR) model may be relevant to the rehabilitation of offenders in Japan. The similarities that I refer to are found in the fundamentals of human behavior. That is, criminal offenders in Canada, Japan and elsewhere in the world learn behaviors in accordance with universal learning principles. Individuals become criminal offenders in much the same way throughout the world. There may be some minor exceptions that are associated with race and culture but for the most part the similarities outweigh the differences.

After years of rising incarceration in the United States, the incarceration rate showed its first decrease in 2010 (Guerino, Harrison, & Sabol, 2011). Nevertheless, the U.S. continues to have the highest incarceration rate in the world estimated to be 730 per 100,000 in 2010 (International Centre for Prison Studies, 2012). In contrast, Japan's incarceration rate is estimated at 55 per 100,000 and Canada has an incarceration rate of 117 per 100,000. While Canada has approximately 39,000 offenders in prisons and Japan approximately 66,000 incarcerated, the U.S. has 1.6 million imprisoned offenders (Guerino et al., 2011)! With respect to community supervision (probation and parole), non-custodial sentencing options are more prevalent in Canada compared to Japan. In Canada, approximately 115,000 adult offenders are under probation or parole supervision (Public Safety Canada, 2011). In Japan, with nearly four times the population of Canada (127 million vs. 34 million) there are approximately 18,000 adult offenders under probation or parole supervision (Someda, 2012; Ministry of Justice Japan, 2011a, 2011b).

Incarceration is one of many correctional sanctions intended to deter re-offending. However, imprisonment and other criminal justice sanctions (e.g., intensive probation, boot

camps) have failed to reduce offender recidivism. My intention here is not to summarize this literature as well-documented reviews exist elsewhere (Andrews & Bonta, 2010a, b; Auerhahn, 2003; Doob & Webster, 2003; Smith, Goggin, & Gendreau, 1999; von Hirsch, Bottoms, Burney, & Wikström, 1999). Rather, I would like to summarize what we know about offender rehabilitation and how the RNR model has been directing the field.

The RNR Model of Offender Rehabilitation

As early as 1954, reviews of the offender rehabilitation literature have shown evidence that treatment can reduce offender recidivism (Kirby, 1954). Even a close examination of Martinson's (1974) review of 231 offender treatment programs challenges his pessimistic conclusion that there is "very little reason to hope that we have found a sure way of reducing recidivism through rehabilitation" (p. 49). In fact, between 40% and 60% of the 231 studies (depending upon one's definition of recidivism) demonstrated reduced recidivism. Following Martinson (1974), the evidence on the effectiveness continued to grow (Adams, 1975; Gendreau & Ross, 1987; Palmer, 1975) but there was an insufficient understanding on the specifics of effective treatment.

In 1990, two articles were published that provided a framework and the evidence for the factors associated with treatment effectiveness. The first article by Andrews, Bonta and Hoge (1990) proposed a framework for understanding treatment through the following three principles:

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 behavioral treatment and tailoring the intervention to the learning style, motivation, abilities and strengths of the offender.

Andrews and his colleagues (1990) also described the *Professional discretion principle* (exercise discretion as part of a fair and just system) but this will not be discussed in this paper since empirically this principle has had less of an impact compared to the first three principles.

Risk principle. The risk principle specifies who should be treated. In particular, it is the higher risk offender who appears to benefit the most *provided* that the treatment is of sufficient intensity. There is little research on how much treatment is necessary and our best estimates are approximately 100 hours for juveniles (Lipsey, 1999) and 300 hours for adults (Bourgon & Armstrong, 2005). Furthermore, the evidence would suggest that

treatment directed to low risk offenders should be kept to a minimum as there have been reports that intense treatment provided to low risk offenders increased recidivism (e.g., Andrews & Dowden, 2006; Bonta, Wallace-Capretta, & Rooney, 2000).

What is often neglected by service providers in their enthusiasm to provide treatment is that to follow the risk principle it is *necessary* to use a well-validated offender risk assessment instrument. Otherwise, how can one know that the truly higher risk offenders are being directed to treatment and not low risk offenders? This is a very important point since too many correctional jurisdictions provide treatment services without knowing with any certainty that the appropriate offenders are receiving the treatment. Furthermore, these treatment assignment decisions cannot be left to professional judgment. Actuarial risk instruments are critical for such decisions. There is abundant research demonstrating that professional judgment predicts future criminal behavior with less accuracy than actuarial assessment instruments (Andrews, Bonta, & Wormith, 2006; Bonta, Law, & Hanson, 1998; Hanson & Morton-Bourgon, 2009).

Actuarial risk assessment instruments can be comprised of predominately static risk factors (e.g., prior criminal convictions, history of drug abuse) or a mix of static and dynamic risk factors (Bonta & Wormith, 2007). Dynamic risk factors differ from static risk factors in that they can change in both directions (e.g., starting or stopping drug use). Static risk scales show good predictive accuracy but by limiting the assessment of dynamic risk factors these assessment instruments make it very difficult to follow the Need principle.

Need principle. The second principle, the Need principle, describes what should be the goals of treatment. Treatment goals address the needs of offenders. For example, the goal may be to reduce drug abuse or to increase self-esteem or perhaps to do both. Offenders have many needs but, in general, there are the following two different types of needs: 1) criminogenic and 2) non-criminogenic. Criminogenic needs are functionally related to criminal behavior while non-criminogenic needs show little or no relationship to criminal behavior.

Table 1 illustrates the criminogenic and non-criminogenic needs most often targeted in rehabilitation programs. It is also important to note that criminogenic needs are *dynamic risk* factors and good offender assessment instruments should include these dynamic risk factors along with the more traditional static risk factors.

Table 1 Criminogenic and Non-Criminogenic Needs

Criminogenic	Non-Criminogenic
Procriminal attitudes	Poor self-esteem
Antisocial personality (low self-control, hostility, disregard for others, callousness)	Vague feelings of emotional discomfort (anxiety, depression, feelings of alienation)
Procriminal associates	Major mental disorder (schizophrenia, depression)
Employment/education (unemployed, poor academic achievement)	Lack of ambition
Family/marital (instability, conflict)	History of victimization
Substance abuse	Fear of official punishment
Leisure/recreation	Lack of physical activity

Inspection of the criminogenic needs presented in the left column of Table 1 also is a summary of what Andrews and Bonta (2010a) call the Central Eight risk/need factors of criminal behavior (criminal history, a static risk factor, completes the list). There is a growing body of evidence that the Central Eight risk/need factors are applicable to a wide range of offender groups. The validity of the Central Eight have been found among male offenders (Andrews at al., 2006), women (Andrews, Guzzo, Raynor, Rowe, Rettinger, Brews, & Wormith, 2012), Aboriginal offenders (Guttierez, Wilson, Rugge, & Bonta, in press), ethnic minorities (Andrews, Dowden, & Rettinger, 2001), and mentally disordered offenders (Bonta, Blais, & Wilson, in press). Whether the Central Eight risk/need factors will apply to the Japanese correctional context remains to be seen but the extant evidence is encouraging.

Both the Risk and Need principles demand the use of validated, actuarial risk/need assessment instruments. In addition, the assessment of the Central Eight risk/need factors is highly desirable. Note that the assessment of self-esteem, anxiety, mood disturbance and other non-criminogenic needs are not primary considerations when the purpose is to classify offenders into different risk levels and then to direct them into treatments whose purpose is to reduce recidivism. Offenders may need treatment to address various emotional and psychological discomforts and the treatment may be successful in alleviating

these discomforts but a change is criminal behavior will not follow. Only by addressing criminogenic needs will there be a change in criminal behavior.

Currently, the most widely used offender risk/need assessments in the world today are found in the Level of Service (LS) instruments. The LS instruments consist of a suite of instruments ranging from the Level of Service Inventory-Revised (LSI-R; Andrews & Bonta, 1995) to the Level of service/Case Management Inventory (LS/CMI; Andrews, Bonta, & Wormith, 2004). All of the LS instruments assess the Central Eight. The more recent LS instruments such as the LS/CMI also provide a case management plan and assess responsivity factors (to be described shortly). The LS instruments have demonstrated predictive validity across a range of offenders (e.g., men, women, youth, mentally disordered) and outcomes (e.g., violence, parole violations, sexual offending). First developed and validated in Canada, the instruments have now been cross-validated in a variety of countries and cultures including United States, the United Kingdom, Australia, and Singapore (for a summary of the research on the LS instruments see Andrews, Bonta and Wormith, 2010).

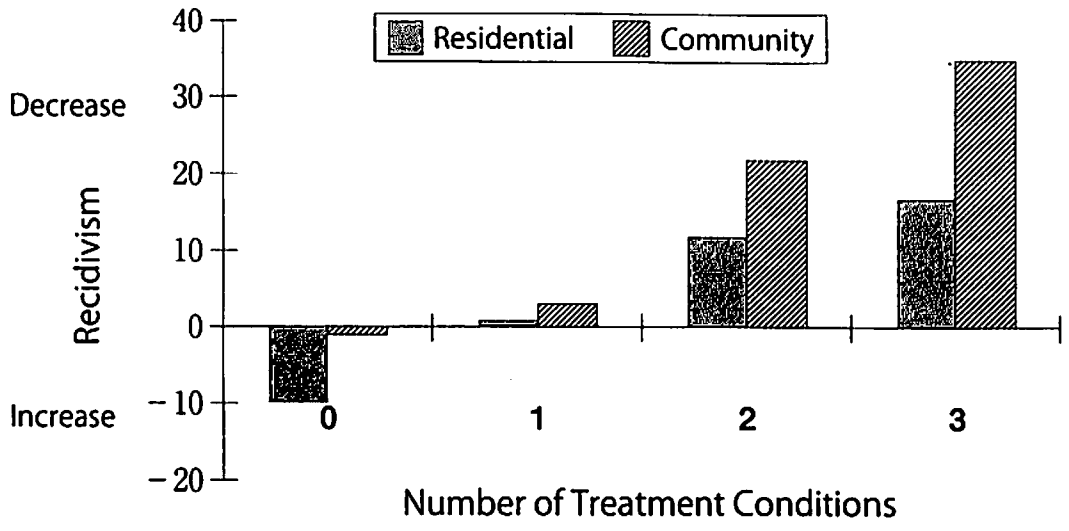
Responsivity principle. The third major principle of the RNR model is the Responsivity principle. This principle addresses how the intervention should be delivered and there are two parts to the Responsivity principle. First there is general responsivity which calls for the use cognitive-behavioral interventions. The second part is specific responsivity. Specific responsivity refers to individualizing the treatment according to strengths, ability, motivation, personality and other personal factors in order to enhance the person's responsiveness to the cognitive behavioral intervention.

In the same year that the RNR principles were described, Andrews and his colleagues published a second paper that provided the first empirical support for the three RNR principals (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990). In a meta-analytic review of 124 comparisons of a treatment intervention with a control condition two important results emerged. First, providing any human service was associated with a 15 percentage point reduction in recidivism (i.e., assuming a no treatment base rate of recidivism of 50%, providing some type of treatment resulted in a 35% recidivism rate). Second, the magnitude of the reduction in recidivism was in accordance with the degree of adherence to the risk, need, and responsivity principles with the greatest reductions found when all three principles were followed.

Since the two 1990 papers, Andrews and Bonta (2010a) have expanded upon the three principles to include other important factors associated with effective treatments and the evidence in support of the RNR model has continued to grow. From their most recent

review of over 250 treatment studies, providing treatment services is now associated with an average 12 percentage point reduction in recidivism. However, the impact on recidivism reduction increases with adherence to the RNR principles (see Figure 1).

Figure 1 **Adherence to the RNR principles by setting**



(Adapted from Andrews & Bonta, 2010a)

Referring to Figure 1, 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-behavioral techniques) are actually criminogenic (approximately 1% point higher recidivism rate for community-based interventions but 10% points higher for residential or prison-based programs). However, if a treatment intervention begins to adhere to just one of the principles we start to see reductions in recidivism. When all three principles are evident in a rehabilitation program 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.

In summary, treatment can work with an expected 12 percentage point difference between treated and untreated offenders. Furthermore, the differences widen when the principles are closely followed and when the treatment is delivered in a community setting. The question then arises: "what is achievable in a "real world" setting?".

Treatment in the "Real World"

In the Andrews and Bonta (2010a) review of the treatment literature there are a mix of studies that include "demonstration" and "real world" projects. Demonstration projects typically are small scale (less than one hundred participants), the evaluators are involved

in the design, delivery and supervision of the service, the evaluation is tightly controlled, and the treatment staff is not only highly committed to the program but they are also well trained. The "regular" or "real world" programs are larger in scale and the treatment is often delivered by others who were not involved in the design, delivery and evaluation of the program. All of these factors are known to be related to the effectiveness of treatment.

Although the difference between demonstration projects and real world treatments may be due, to a large extent, to issues of program integrity the fact remains that when real world projects are compared to demonstration projects their effectiveness diminishes. This is not to say that real world programs are ineffective. For example, Lipsey's (1999) study of 196 juvenile "practical rehabilitative programs" led him to conclude that "rehabilitative programs of a practical "real world" sort clearly can be effective" (p. 641). Andrews and Bonta (2010a) provide an analysis of the two types of programs drawing upon their database of both adult and youth treatment studies. The relevant results are shown in Table 2 (the effect size is a statistical measured used to quantify results from many studies; the higher the number the greater the reduction in recidivism)

Table 2 **Mean Effect Size by Level of RNR Adherence and by Demonstration and Regular Programming (k = number of tests)**

	Level of Adherence with the RNR Principles			
Program Type	0 (None)	1	2	3 (Full)
Demonstration (47)	.01 (1)	.07 (7)	.31 (16)	.34 (23)
Real World (209)	−.02 (93)	.04 (71)	.09 (34)	.15 (11)

To what extent is RNR Adherence associated with increased effectiveness in real world programming? Inspection of Table 2 shows that RNR Adherence was associated with enhanced recidivism reduction in both types of programs. With full adherence, the mean effect of .15 for real world programs is modest compared to the comparable mean effect reported for demonstration projects (.34). What may account for the diminished effectiveness? Certainly program integrity and implementation issues are important explanations. Further analyses of the data in Table 2 also found that demonstration projects are more likely to follow the RNR principles than real world programs. In other words, demonstration projects more closely follow scientific principles.

An illustration of what is possible comes for our own recent experience at Public

Safety Canada. In the Strategic Training Initiative in Community Supervision (STICS) 80 probation officers from three Canadian provinces (British Columbia, Saskatchewan and Prince Edward Island) were randomly assigned to either a training condition or routine supervision. The training involved enhancing adherence with the RNR principles. For example, the probation officers supervised medium to high risk offenders and were trained to address their client's criminogenic needs using cognitive-behavioral interventions.

The probation officers in both the experimental and control groups were asked to audio record a sample of their supervision sessions. These recordings were reviewed for their content (did the probation officers talk about the criminogenic needs of their clients?) and for the use of cognitive-behavioral skills. First of all, analyses of the audio recordings found the trained officers far more likely to discuss the criminogenic needs of their clients than the control group officers and to use cognitive-behavioral intervention techniques (Bonta, Bourgon, Rugge, Scott, Yessine, Gutierrez, & Li, 2011). In addition, the clients of the experimental probation officers had a recidivism rate of 25%. The clients of the control probation officers had a recidivism rate of 39.5%. This project was a mix of real world (e.g., a client sample of more than 100) and demonstration (e.g., evaluator involved in program design, delivery and evaluation) and we achieved a difference in recidivism rate of 14.5 percentage points, a difference that was more aligned to real world studies than demonstration projects.

The results of the STICS evaluation (Bonta et al., 2011) were very promising and subsequently British Colombia' s Community Corrections Division decided to capitalize on the results of the pilot study and implement STICS across the province. The decision to do so was based on a number of factors ranging from the reduction in recidivism observed among the probationers to reports from the officers involved in the project about how STICS improved their overall morale on the job and confidence in their ability to work with difficult clients. As important as these factors were, the potential cost savings with a province-wide roll-out was also a key consideration.

In the fiscal year spanning April 1, 2010 to March 31, 2011, on any given day there was an average of 10,250 medium and high risk sentenced offenders (including probation, recognizance peace bonds, and conditional sentence orders) under supervision in the province at a cost of $10.61 per day. Assuming a 14.5 percentage point drop in recidivism, there could be a decrease of 1,486 offenders under probation and a cost savings of $5,754,757.90 per year. This cost saving refers only to community sentences and medium and high risk clients and does not include any savings that may be realized by fewer bail

clients, prison remands, police investigations, court and prosecution costs. Based upon consideration of all of the previously noted factors, the 2012 budget announced $9.5 million dollars over three years to be set aside to hire 36 additional probation officers to allow selected probation officers to assume the roles of STICS coaches and five who would eventually become STICS trainers (British Columbia Newsroom, 2012).

A Summary and Closing Thoughts on the RNR Model and Japanese Community Corrections

This brief review suggests that offender treatment can be highly effective if it follows the RNR principles and that the treatment is delivered with integrity. Within community settings, demonstration projects with full adherence to the RNR principles average 35 percentage points lower in recidivism. In the real world, the reduction in recidivism falls to an average of 15 percentage points. These results are very encouraging for community corrections and the RNR model has become the major model for correctional rehabilitation in most of the Western world (Cullen, 2012; Ogloff & Davis, 2004; Ward, Melser, & Yates, 2007). However, none of the studies in the various meta-analyses supportive of RNR come from Japan. Would the RNR model add value to community corrections in Japan? Without the certainty of research conducted in Japan, I would suggest that RNR would have relevance and I would like to outline my reasons and what Japanese community corrections may learn from the model.

My first reason to think that the RNR model would generalize to Japan is based on theory. The RNR model springs from Andrews and Bonta's (2010a) General Personality and Cognitive-Social Learning (GPCSL) perspective of criminal behavior. This is a social learning perspective that assumes that criminal behavior is learned within a social context. GPCSL places particular emphasis on criminal history, procriminal attitudes, procriminal associates and antisocial personality pattern (i.e., impulsiveness, thrill-seeking, egocentrism). The four factors are referred to as the "Big Four". Also important but not to the same degree as the Big Four, are the "Moderate Four" (family/marital functioning, substance abuse, leisure/recreation and education/employment). Together the Big Four and Moderate Four represent the Central Eight risk/need factors. Although GPCSL is specific to criminal behavior, the Central Eight elements are based on the general psychology of human behavior and therefore, should not be severely limited by race/culture, gender, economic level and age.

A short illustration may help to explain the generality of GPCSL (and by extension,

the RNR model). I will just present in my example the Big Four risk/need factors. Hopefully it is clear to the reader that if an individual has a lengthy criminal history, thinks that doing crime is justifiable, has criminal friends and is somewhat of the risk taker with little regard to the feelings of others then this individual has a high probability of engaging in crime. Now, what happens when I use the Big Four to try and explain everyday human behavior? Let me give the example of a car salesman trying to predict whether a new client will buy a brand new Toyota. All that the salesman needs to ask the potential customer are the following four questions: 1) have you ever owned a Toyota before (history)?, 2) do you think that Toyota makes good automobiles (attitude)?, 3) has anyone in your family or close friend bought a Toyota (associates)?, and 4) do you think that driving a Toyota would make you feel happy and proud to have such a car (personality)? If the customer answers yes to all four questions and the price is right then the salesman will likely have a sale. My point from the Toyota example is that these Big Four factors are probably just as relevant in Japanese culture as it is across different nationalities. Therefore, it is quite likely that they will also apply to the Japanese criminal offender.

Second, I would point to the risk factor research. The Central Eight risk/need factors, as I have already noted, have generalized to a variety of offenders including male offenders, female offenders, Aboriginal offenders from Canada, the U.S., Australia, and New Zealand, ethnic minorities from Canada and the U.S. and mentally disordered offenders. Demonstrations of the predictive validity of the LS instruments in a range of countries further give weight to the generality of the Central Eight and the RNR model. Would an LS instrument show similar predictive validity in Japan? Research is needed to answer this question unequivocally but I suspect that when the studies are conducted the results will confirm the validity of the instrument and the RNR model.

Finally, we have the evidence from the treatment literature. Interventions that follow the RNR principles have consistently shown reductions in recidivism, even in real world settings. Once again, this has been demonstrated across a range of offenders and in different countries. Would the Japanese correctional context be so markedly different to run against the findings from hundreds of studies involving thousands of offenders? Does it not make sense to deliver your interventions to the higher risk offenders, to target in treatment their substance abuse, replace their criminal friends with prosocial friends, find them employment that they can feel satisfied with, etc.? And, what about cognitive-behavioral treatment? This may be the more significant challenge in testing the RNR model in Japanese community corrections. Cognitive-behavioral therapies are a relatively

recent introduction to Japan with psychodynamic/Jungian psychotherapy and therapies that are uniquely Japanese such as Morita therapy being more widely practiced (Iwakabe, 2008; Sato, 1998). Whether cognitive-behavioral therapies will be more widely accepted and used with criminal Japanese offenders remains to be seen.

Once more, I would like to extend my thanks to the Japanese Association of Offenders Rehabilitation for the opportunity to write an article for their new journal. I hope, at least, that my presentation of the RNR model has ignited an interest and provoked some thoughts in readers of the Journal. I look forward to hearing of future developments in what seems will become a new and exciting era in Japanese community corrections.

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