AN EXPERIMENTAL DEMONSTRATION OF TRAINING PROBATION OFFICERS IN EVIDENCE-BASED COMMUNITY SUPERVISION

JAMES BONTA
GUY BOURGON
TANYA RUGGE
TERRI-LYNNE SCOTT
ANNIE K. YESSINE
LETICIA GUTIERREZ
JOBINA LI
Public Safety Canada

The present study evaluated a training program for probation officers based on the risk-need-responsivity (RNR) model of offender rehabilitation. A total of 80 officers were randomly assigned to either training or a no training condition. The probation officers then recruited 143 probationers and audiotaped their sessions at the beginning of supervision, 3 months later, and 6 months later. The audiotapes were coded with respect to the officers' adherence to the RNR model. The experimental probation officers demonstrated significantly better adherence to the RNR principles, with more frequent use of cognitive-behavioral techniques to address the procriminal attitudes of their clients. Finally, the analysis of recidivism rates favored the clients of the trained officers. The findings suggest that training in the evidence-based principles of the RNR model can have an important impact on the behavior of probation officers and their clients.

Keywords: probation; training; offender rehabilitation; cognitive-behavioral

Many correctional jurisdictions are grappling with the challenges of managing large criminal offender populations. These challenges are particularly evident in the United States, where America has the highest incarceration rate in the world (756 per 100,000; Walmsley, 2009) and a probation and parole population exceeding 5 million (Glaze & Bonczar, 2007). Faced with burgeoning prison populations that strain the financial resources of many states (Pew Center on the States, 2009; Stemen, 2007), resources are being redirected to community reentry and supervision programs (e.g., the Second Chance Act that took effect in 2008). Such pressures have resulted in many jurisdictions rethinking the balance between custody and community supervision.

Probation and parole are viewed as having positive benefits by minimizing the criminogenic effects of imprisonment and facilitating the community integration of offenders (Abadinsky, 2009; Gibbons & Rosecrance, 2005). However, there is little evidence that community supervision actually reduces offender recidivism. Bonta, Rugge,

AUTHORS' NOTE: *Terri-Lynne Scott is now at the Correctional Service of Canada, Ottawa, Ontario. We would like to thank Kyle Simpson, who was part of the team in coding the audiotapes along with assistance from Leslie Helmus and Jennifer Ashton. Our thanks as well to Julie Blais for coding the recidivism data. Our special gratitude is extended to the probation officers and their managers who made this study possible. The views expressed are those of the authors and do not necessarily represent the views of Public Safety Canada.* *Correspondence concerning this article should be addressed to James Bonta, Corrections Research, Public Safety Canada, 340 Laurier Ave. W., Ottawa, Ontario, Canada, K1A 0P8; email: Jim.Bonta@ps.gc.ca.*

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Scott, Bourgon, and Yessine (2008) identified 15 studies that compared (a) community supervision with an alternative criminal sanction (e.g., prison sentence, fine) and (b) a longer period of community supervision with a shorter period of supervision. These 15 studies yielded 26 effect size estimates. Bonta et al. (2008) found a reduction in general recidivism of only two percentage points for offenders under community supervision (ϕ = .022, 95% CI = .014, .030). When violent recidivism was examined as the outcome criterion, there were fewer effect size indicators (k = 8), and no significant decrease in recidivism was found associated with community supervision (ϕ = .004, 95% CI = –.008, .016). These findings are in sharp contrast to the more positive results found in reviews of the offender rehabilitation literature.

OFFENDER REHABILITATION

The roots of the "get-tough" movement that led to the present prison crisis can be traced to a sweeping review of 231 controlled correctional interventions by Martinson and his colleagues (Lipton, Martinson, & Wilks, 1975; Martinson, 1974). The conclusion drawn was that "with few exceptions there is little reason to hope that we have in fact found a sure way of reducing recidivism through rehabilitation" (Martinson, 1974, p. 34). This "nothing-works" pessimism fueled a deterrence approach as the solution to the crime problem. However, research on offender rehabilitation treatment was not abandoned, and in the late 1980s and early 1990s meta-analytic reviews of the literature cast a more favorable light on the effectiveness of treatment. Some of these reviews focused on the methodological moderators of treatment effectiveness (Lipsey, 1995), whereas others adopted a psychologically informed approach (Andrews & Bonta, 2010a; Andrews, Zinger, et al., 1990). The latter perspective is referred to as the risk-need-responsivity (RNR) model of correctional treatment (Andrews & Bonta, 2010a, 2010b; Andrews, Bonta, & Hoge, 1990; Bonta & Andrews, 2010).

The RNR model has been very influential in guiding treatment interventions with criminal offenders (Ogloff & Davis, 2004; Ward, Melser, & Yates, 2007). Of the 15 principles currently represented in the model (Andrews & Bonta, 2010a, 2010b), 3 of them have been at the core since 1990. They are the *risk principle* (match the level of service to the offender's level of risk; provide intensive services to higher risk clients and minimal services to lower risk clients), the *need principle* (target criminogenic needs or the dynamic risk factors functionally related to criminal behavior such as procriminal attitudes and substance abuse), and the *responsivity principle* (match the style and mode of intervention to the abilities, motivation, and learning style of the offender; cognitive-behavioral interventions are generally the most effective with offenders).

The RNR model of offender rehabilitation was first applied in Andrews, Zinger, et al.'s (1990) meta-analytic review of 80 controlled interventions that yielded 154 effect size estimates. This review has subsequently been expanded to include 374 effect size estimates (Andrews & Bonta, 2010a). Andrews and colleagues found that as adherence to the three principles increased, there was a stepwise reduction in recidivism. In the most recent review (Andrews & Bonta, 2010a), nonadherence to the three principles was actually associated with a small increase in recidivism (r = –.02, k = 124). When treatment adhered to at least one of the principles, there was a small decrease in recidivism (r = .02, k = 106). Larger decreases were observed with increased adherence to the RNR principles

(two principles, $r = .18$, $k = 84$; three principles, $r = .26$, $k = 60$). If the RNR principles work in offender rehabilitation programs, then it should also be relevant in the case of the supervision of offenders in the community.

COMMUNITY SUPERVISION AND EVIDENCE-BASED PRACTICE

As noted earlier, there is little evidence showing that community supervision reduces recidivism. Bonta et al. (2008) explored the possible reasons for the lack of evidence through a study of 62 probation officers. The case files and audiotaped supervision sessions with 154 clients were analyzed with respect to adherence to the RNR principles. Frequency of contact was only mildly related to the offender's risk level (risk principle), and important criminogenic needs such as procriminal attitudes and friends were rarely addressed (need principle). Furthermore, cognitive-behavioral techniques of interpersonal influence were demonstrated in fewer than one quarter of the 211 audiotapes (responsivity principle). The findings strongly suggested a need for training staff to better follow the RNR principles during community supervision.

The training typically delivered to probation and parole officers is largely on law, the policies and regulations of the jurisdictions, issues of safety, administering risk assessment instruments, and writing presentence reports (Annison, Eadie, & Knight, 2008). Staff may receive training in motivational interviewing (McMurran, 2009) and relapse prevention (Dowden, Antonowicz, & Andrews, 2003), but the underlying rationale for these trainings is not RNR based (i.e., the interventions are not matched according to the offender's risk level, and in motivational interviewing, the targeting of criminogenic needs is not a focus). Although some staff may receive training in delivering manualized, RNR-based group treatment programs, there is a notable lack of training on how to relate to a client on a one-on-one basis (Paul & Feuerbach, 2008). Perhaps this is a reflection of a history of hiring social work and psychology graduates who are assumed to have the requisite counseling skills for effective case management (Trotter, 2000). However, except for a few university departments in North America that have a forensic or correctional specialization, most new graduates have had little exposure to the RNR model.

Research on applying the RNR principles to one-on-one supervision is almost nonexistent. This is somewhat surprising given that there is a rich literature on the "core correctional practices" derived from the RNR principles (Andrews & Bonta, 2010a; Dowden & Andrews, 2004). Two noteworthy exceptions are the training programs developed by Trotter (1996) and Robinson, Vanbenschoten, Alexander, and Lowenkamp (in press). Trotter followed some of the elements of the responsivity principle with 5 days of training on prosocial modeling, empathy, and problem solving. After the initial training, 12 officers attended ongoing training sessions and applied the skills during supervision. The recidivism rate of 93 clients of the experimental officers who continued their involvement in the ongoing training and applied these skills, as evidenced by file reviews, was compared to that of 273 clients of the 18 officers who reverted to their routine supervision practices. The 4-year reconviction rate was 53.8% for the clients of the officers who continued to apply the skills taught in training, and the rate for the clients of the officers engaged in routine supervision practices was 64.0% ($p = .038$).

Robinson et al. (in press) trained 41 officers responsible for pretrial services and probation in core correctional practices (Dowden & Andrews, 2004). The training consisted

of the effective application of modeling, reinforcement, and other cognitive-behavioral interventions. The 295 cases of the trained officers demonstrated a recidivism rate of 26%, whereas the 218 cases of the control officers showed a rate of 34%. The reduction in recidivism among the clients of the trained officers appeared to be concentrated among the moderate-risk offenders as there was little difference in the recidivism of the high-risk clients of the trained staff (35%) and the control staff (37%). The lack of impact on the high-risk clients may have two possible explanations. First, districts that trained the officers in motivational interviewing skills had more successful clients than the districts where such training was not provided (C. Lowenkamp, personal communication, June 21, 2011). That is, good relationship skills may have moderated the effect. Second, the base rates of the use of a cognitive model by the officers were relatively low (17%; Table 5 of Robinson et al., in press), a factor that may be particularly important for high-risk offenders.

THE PRESENT STUDY

The evidence from evaluations of offender treatment interventions provides convincing support for the RNR principles. The evidence on the effectiveness of community supervision suggests that much needs to be done and that a promising research agenda is to introduce training that follows the RNR principles. The present study attempted to advance this agenda in two ways. First, on a conceptual level, the training model that was developed incorporated adherence to all three of the RNR principles with a particular emphasis on targeting problematic attitudes and thoughts. Attitudes and cognitions are considered to be a major risk or need factor that underlies all of the other criminogenic needs (Andrews & Bonta, 2010a, 2010b; Bonta & Andrews, 2010). Some cognitions (e.g., "It is alright to steal, they are insured") have obvious associations to criminal behavior, whereas other thoughts affect criminogenic needs that then link to criminal behavior (e.g., "I need alcohol to cope with my problems"). In the training, attitudes and cognitions became a target for change using cognitive-behavioral intervention techniques (i.e., adherence to the responsivity principle). Second, ongoing clinical support was provided to the trained officers (described in the method section).

An experimental design was used to evaluate the impact of the training and clinical support. The content of discussions between the probation officer and his or her client and the skills of the officer were assessed by audiotaping their supervision sessions. Our first hypothesis was that training would change the behavior of the probation officers. Our second hypothesis was that changes in the behavior of the officers would be associated with lower recidivism rates among the clients of the trained staff.

METHOD

THE TRAINING PROTOCOL AND CLINICAL SUPPORT

The training consisted of 11 modules delivered over 3 days to staff who were actively supervising adult offenders and who will be described in more detail shortly. Training began in a didactic manner with an explanation of the RNR principles and the rationale for the training. However, by midmorning of the first day classroom exercises were introduced (Module 3—criminogenic needs), and group participatory activities increased with each

module until on the third day (Module 10—integration scenarios) participants were fully engaged in role-plays. Unlike many other correctional treatment programs that cover a variety of offender needs (e.g., substance abuse, marital issues, anger management) in one omnibus program, we decided to focus the training on recognizing the importance of procriminal attitudes and cognitions and changing them.

Module 4 of the training introduced the importance of procriminal attitudes, and the remaining modules taught probation officers the skills needed to help their clients change their thinking patterns. Module 5 emphasized the importance of establishing a good relationship with the client (a responsivity factor), and Module 6 presented a cognitive-behavioral model to understand the linkages between thoughts and behavior. The elements of cognitive restructuring were introduced in Module 7, and Modules 8 and 9 taught various techniques of influencing behavior (use of reinforcement, problem solving, etc.). The last module was an overview of the training and an introduction to the monthly meetings and clinical support.

Following the initial training, ongoing clinical support was provided with three components. The first was a refresher course that was held approximately one year after training. The second component consisted of a half-day meeting held each month. At the monthly meetings, a theme was selected (e.g., the effective use of reinforcement) and exercises were assigned for discussion among the group members. The exercises were based on snippets from audiotaped supervision sessions related to the theme. After a group discussion of the exercises, a teleconference was held with the trainers, who gave feedback and coaching. The third type of clinical support was the provision of individual feedback by a trainer when requested by a probation officer. Adding clinical support to training has been shown to be important in skill development (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004; Walters, Matson, Baer, & Ziedonis, 2005).

RECRUITMENT AND ASSIGNMENT OF PROBATION OFFICERS

The directors of probation services from the Canadian provinces of British Columbia, Saskatchewan, and Prince Edward Island asked staff who supervised adult offenders (in Canada, age of 18 years and older) if they would volunteer to participate in the Strategic Training Initiative in Community Supervision (STICS) project. Staff were explained the nature of the project and the research requirements (e.g., audiotaping supervision sessions, attending monthly clinical support meetings) and that they would be randomly assigned to an experimental or a control group. Other than volunteering for the project, there were no additional criteria for participating in the study.

A total of 80 probation officers volunteered for the study (55 from British Columbia, 15 from Saskatchewan, and 10 from Prince Edward Island). The average age of the probation officers was 38.9 years. The majority were women (67.5%), and 77.4% of the officers were Caucasian (8.1% were Aboriginal and 14.5% came from a variety of ethnic backgrounds). The probation officers were assigned on a 60:40 ratio to the experimental (i.e., STICS training) or control (i.e., no training) groups using a randomly generated number through SPSS. We oversampled the experimental cases to increase our sample size for planned analyses specific to the trained officers. Subsequently, all 51 probation officers who were assigned to the experimental conditions attended the 3-day STICS training (29 officers were assigned to the control group). In the situation where staff came from the same office,

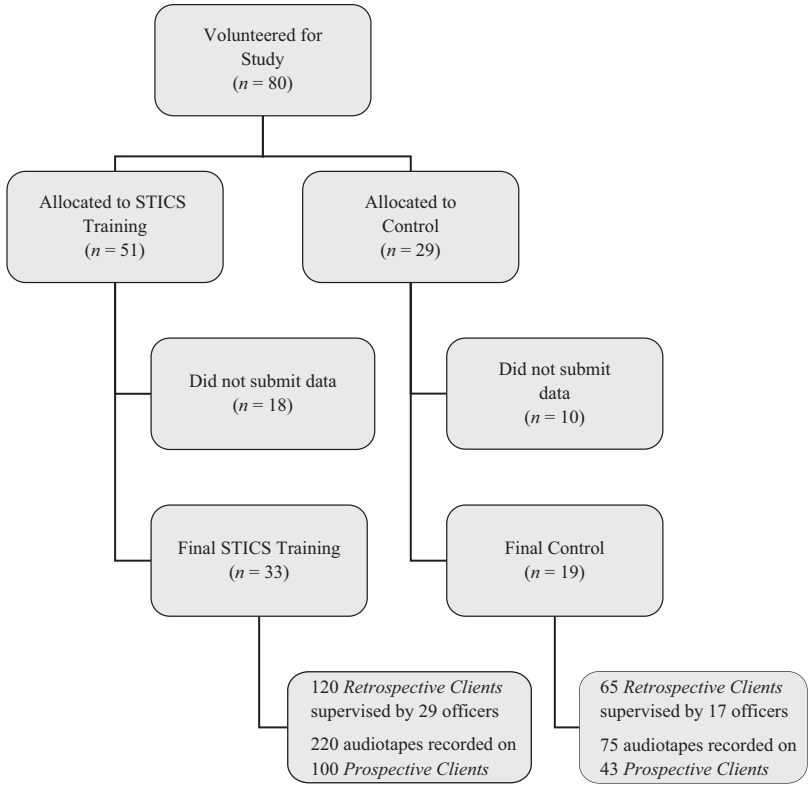

Figure 1: CONSORT Diagram of Probation Officer Selection and Flow Through

the officers receiving the training were instructed not to share their training materials or discuss the training with the control participants to avoid any contamination effects.

Following training, each probation officer was asked to recruit and submit data on six clients as new cases were assigned to community supervision (further details are given under Data Collection Procedures). Even though the probation officers were all volunteers, 28 officers did not submit any data posttraining (i.e., they failed to submit at least one audiotaped session with the accompanying research documents on clients assigned to their case load *after* group assignment). The attrition rates for the experimental (35.3%) and control groups (34.5%) were not significantly different, $\chi^2(1, 80) = 0.005$, $p = .94$. The reasons for attrition were benign in 35.7% of the cases (e.g., job change, maternity leave, or extended leave), and for the remaining 64.3%, these officers simply did not comply with the data collection requirements. No statistically significant differences between the two groups on the reasons for attrition or personal demographic characteristics (i.e., age, gender, race, and years of experience) were found.

Figure 1 (CONSORT diagram) displays the selection process and the number of participating officers who attended training and who submitted data to the project including the number of audiotapes submitted and the number of clients who were examined for the recidivism analyses (see below).

RECRUITMENT OF CLIENTS

Each probation officer was asked to recruit two medium- and four high-risk clients as new cases were assigned to community supervision (*prospective clients*). A consent form was signed by the client as probationers were asked to complete research forms and agree to have some of their sessions audiotaped. The three jurisdictions each had different risk assessment instruments, and medium- and high-risk probationers were defined according to the jurisdiction's specific instrument. In a few cases, policy overrides led an actuarially low scoring offender to be placed into a medium-risk category (5% of cases). Of the 325 probationers who were asked to participate in the study, 183 (56.3%) agreed. Clients were considered active when the first recording was submitted (usually within 3 months of commencing community supervision as staff first had to complete a risk and need assessment). Given a delay between the consent to participate and the first audiotape recording, 40 probationers had absconded, had reoffended, or were transferred to another office, leaving 143 active cases.

DATA COLLECTION PROCEDURES

For all participating officers ($N = 52$), we wanted to assess their pretraining effectiveness in reducing reoffending. Therefore, we drew a random sample of four medium- or high-risk offenders under the supervision of the probation officer 1-year *prior* to entering the project (*retrospective clients*). This could not be done with each and every probation officer as some were either not on staff or in their present position 1 year prior to entering the project. For some officers, there was additional attrition because of lost historical records of the officer's caseloads. This resulted in a retrospective client sample of 185 clients (120 clients from 29 of the 33 participating experimental officers and 65 clients supervised by 17 of the 19 officers in the control group).

Following training, the probation officers were asked to audiotape their prospective client at three points during sessions—at the beginning of supervision after the risk–need assessment was completed (Tape 1) and 3 months (Tape 2) and 6 months into supervision (Tape 3). In addition to the audiotapes, staff submitted offender personal demographic and criminal history information. As noted earlier, each jurisdiction used a different risk–need assessment instrument. However, the classification instruments all measured the seven criminogenic needs. To create uniformity, we standardized the assessment of offender risk across sites by scoring the 10 items that compose the Criminal History subcomponent of the Level of Service Inventory–Revised (LSI-R; Andrews & Bonta, 1995). Descriptive statistics on personal demographic and criminal history information on the prospective clients are presented in Table 1. The only statistically significant difference between the groups of prospective clients was found for race with four (9.3%) control clients from an "other" minority group (i.e., Asian, Indo-Pakistani) compared to one (1.0%) experimental client.

Although the probation officers were asked to recruit six clients each, slightly fewer than half of the expected number were recruited ($n = 143$). A total of 100 prospective clients were supervised by 33 experimental officers, and 43 prospective clients were supervised by 19 control officers. The experimental probation officers recruited, on average, more clients ($M = 3.03$, $SD = 1.70$) than the control officers ($M = 2.26$, $SD = 1.63$), but this difference was not statistically significant, $t(50) = 1.588$, $p = .119$.

TABLE 1: Characteristics of the Experimental (n = 100) and Control Probationers (n = 43)

Variable	*Experimental*	*Control*	t *Value or* χ^2
Mean age (*SD*)	35.3 (11.5)	32.6 (9.3)	$t(141) = 1.38$, $p = .170$
Male (%)	83.0	93.0	$\chi^2(1, 143) = 2.51$, $p = .113$
Race (%)			$\chi^2(2, 143) = 6.24$, $p = .044$
Caucasian	71.0	67.4	
Aboriginal	28.0	23.3	
Other	1.0	9.3	
Employed (%)	49.0	55.8	$\chi^2(1, 143) = 0.56$, $p = .455$
Marital status (%)			$\chi^2(2, 143) = 4.52$, $p = .104$
Single	39.0	58.1	
Married or common law	35.0	25.6	
Separated or divorced	26.0	16.3	
Violent index offence (%)	56.0	60.5	$\chi^2(1, 143) = 0.25$, $p = .621$
Probation length (months, *SD*)	15.7 (7.34)	15.6 (6.68)	$t(141) = 0.07$, $p = .944$
Risk or need level (%)			$\chi^2(2, 143) = 0.58$, $p = .748$
Low	4.0	7.0	
Medium	40.0	39.5	
High	56.0	53.5	
Mean Level of Service Inventory–Revised criminal history score (*SD*)	4.70 (2.56)	4.79 (2.71)	$t(141) = 0.19$, $p = .849$

ANALYSIS OF THE AUDIOTAPES

A total of 299 posttraining audiotapes were submitted; of these, four were discarded because of technical problems with the recordings, leaving 295 audiotapes for analysis. There were 220 experimental sessions (98 Tape 1, 71 Tape 2, and 51 Tape 3) and 75 control sessions (42 Tape 1, 22 Tape 2, and 11 Tape 3). On average, the experimental officers submitted significantly more audiotapes ($M = 6.76$, $SD = 4.35$) than the control officers ($M = 4.00$, $SD = 3.09$), $t(50) = 2.43$, $p = .02$. However, there were no differences between the experimental (26:5 min) and the control group (24:4 min) in their average length of an audiotaped session, $t(293) = 1.43$, $p = .15$.

Reviews of the audiotapes focused on two general areas: (a) the content of discussions and (b) intervention skills. Audiotapes were rated by two trained staff using a 15-page coding guide (available from the first author). First, raters coded the content of discussion variables in 5-min segments. Following this, the raters then listened to the tape in its entirety and evaluated the session on intervention skills. The tapes were coded independently by the two raters blind to group assignment, and then they reached a consensus rating that served as the basis for analysis.

Discussion content. For the content variables to be rated as present, there had to have been at least two examples to support the rating within a 5-min segment (e.g., a casual reference to a criminogenic need would not be scored). The analysis of the content of discussions was organized around the seven major criminogenic needs described by Andrews and Bonta (2010a, 2010b), namely Antisocial Personality, Antisocial Peers, Family/Marital, Employment/Education, Substance Abuse, Leisure/Recreation, and Procriminal Attitudes. These needs were only rated if that criminogenic need was assessed as a risk factor for that

particular client. For example, if substance abuse was assessed as a criminogenic need and during the session the officer and client discussed substance use, then it was coded under the category of Substance Abuse. However, if the same discussion on substance abuse took place with a client who did *not* have an identified substance abuse problem, then this discussion would be coded as a *noncriminogenic need* (e.g., the probation officer raises the issue of the client's substance abuse 10 years ago but the client does not have a current problem). The one exception to this rule was for Procriminal Attitudes. Given the focus in training on procriminal attitudes, all discussions on procriminal attitudes were rated regardless if the client's risk–need assessment indicated a problem. Based on prior research (Bonta et al., 2008), we expected two discussion areas to be either negatively or minimally related to criminal behavior: the probation conditions (negative relationship) and noncriminogenic needs (minimal relationship). In the STICS training, staff was encouraged to minimize the time they spent discussing these two areas and to pay more attention to the seven criminogenic needs.

A frequency score was calculated for the content of discussion variables based on the total number of 5-min segments in which that topic or need area was discussed. Scores could range from 0 (topic was not discussed) to a maximum score that depended on the length of the session. For example, a session lasting between 56 and 60 min would have a total of 12 segments of 5 min with a maximum score for any topic or need area of 12.

As a result of the varying length of segments in each session, we calculated a simple presence or absence of each type of discussion content (i.e., scored 0 or 1) and the proportion of the session devoted to a criminogenic need, noncriminogenic need, and probation conditions. The proportion measure was the number of 5-min segments during which a topic was discussed divided by the total number of 5-min segments for the session. Proportions closer to 1 indicate that the topic was discussed in most 5-min segments, whereas proportions closer to 0 indicate that very little of the session was spent on that need.

Intervention skills. The two coders rated 24 individual items assessing a variety of skills (e.g., listening, giving feedback, reinforcement, giving homework, cognitive restructuring). These items were rated on a 7-point scale ranging from 1 (*very poor*) to 7 (*very good*). A score of 0 was assigned if the skill did not take place at all.

The 24 items were then grouped into four constructs. The first construct, *structuring skills* (eight items) measured, for example, the quality of checking for any crisis and prioritizing needs. *Relationship-building skills* (five items) included items such as the quality of role clarification and active listening skills. The third construct was the use of *behavioral techniques* (seven items; e.g., the effective use of reinforcement and disapproval, self-management skills). The final construct was *cognitive techniques* (four items that evaluated the targeting of procriminal attitudes and the application of a cognitive-behavioral model with the client, and two items assessing the components of cognitive restructuring). Finally, scores on all four constructs were added to create the global *effective correctional skills.*

Reliability. A random sample of 30 audiotapes was drawn for interrater reliability and coded by two other raters in a similar manner. Interrater reliability was assessed with intraclass correlation coefficients (ICCs; a single-measure two-way random effects model with absolute agreement). For the discussion content variables, the mean ICC was .980 (SD = .031) with a range of .909 to 1.0 (ICC could not be calculated for Leisure/Recreation

as the result of no variance). The average percentage agreement within +/–1 point between the two teams of raters was 99.3%. For the five intervention skills constructs, the mean ICC was .96 (*SD* = .03), ranging from .93 to .99. The high ICCs were not surprising given that the coding was based on consensus by the teams of two primary raters and that of the independent team of two raters.

Finally, internal consistency of the intervention skills was assessed using Cronbach's alpha. Only for behavioral techniques ($\alpha = .56$) was the alpha less than .70. Alphas were in the acceptable range for the remaining constructs (structuring skills = .81, relationship-building skills = .70, cognitive techniques = .76, overall effective correctional skills = .89).

PARTICIPATION IN CLINICAL SUPPORT ACTIVITIES

The following three items assessed each officer's level of participation in the clinical support: *monthly meeting*, *feedback*, and *refresher course*. Using a median split of monthly meeting attendance, officers were awarded 1 point for low attendance (five or fewer meetings) or 2 points for high attendance (six or more meetings). This was then multiplied by a qualitative participation rating assigned by the clinical trainers. The resulting product (ranging from 1 to 6) was then dichotomized using a median split. A low score (less than or equal to 3) was assigned a score of 1 for the monthly meeting variable. A high score resulted in a score of 2. For feedback, officers were awarded 2 points when they received feedback on two or more audiotapes, 1 point when feedback was given for one audiotape, and 0 if they did not receive any feedback. The third item, refresher course, gave officers 1 point if they attended the refresher course. A global *ongoing clinical support* score was calculated by summing the three items ($M = 2.7$, $SD = 1.5$).

RECIDIVISM

Reconviction data were collected through the Royal Canadian Mounted Police's Criminal History Records. This is a national database of an offender's criminal conviction record. The coding of the criminal record and the date of first reconviction for any offense was conducted by a research assistant who was blind to group assignment.

Retrospective clients. The follow-up period was defined as the number of days from when the officer had the first face-to-face meeting until the criminal record was collected. The average follow-up length was 1,254.1 days (*SD* = 167.0), with a range of 816 to 1,914 days and an overall recidivism rate for the entire sample of 51.4% (95 of 185 offenders). There were no significant differences in follow-up length, $t(183) = 1.85$, $p = .065$, for the retrospective clients supervised by the experimental officers ($M = 1270.7$ days, $SD = 174.7$) and the retrospective clients supervised by the control officers (M days = 1225.3; $SD = 148.1$). To control for varying follow-up lengths, we analyzed recidivism data using a fixed 2-year follow-up period and survival analyses that adjusted for time at risk. The overall 2-year recidivism rate was 44.9% (83 of the 185 retrospective clients).

Prospective clients. The follow-up period was defined as the number of days from when the first audiotape recording was made until the criminal record was collected. The average follow-up length was 806.6 days (*SD* = 90.1), with a range of 354 to 959 days and

an overall recidivism rate for the entire sample of 29.4% (42 of 143 offenders). However, the clients supervised by the experimental officers (M days = 796.9, SD = 93.7) had a significantly shorter, $t(141) = 1.98$, $p = .049$, follow-up period than the clients supervised by the control officers (M = 829.1 days, SD = 77.5). To control for this difference, we analyzed recidivism data using a fixed 2-year follow-up period and survival analyses that adjusted for time at risk. The overall 2-year recidivism rate was 30.4%, but it reduced the sample size to 112 clients.

In the present study, scores on the Criminal History subcomponent of the LSI-R ($r = .24$, $p = .000$, $n = 297$) and age ($r = –16$, $p = .005$, $n = 297$) were predictive of 2-year recidivism rates for all clients for whom we had recidivism data (i.e., 112 prospective clients and 185 retrospective clients). Using a group (experimental and control) by time (retrospective and prospective) ANOVA, no significant differences were found on risk, group $F(1, 293) = 0.732$, $p = .393$; time $F(1, 293) = 0.722$, $p = .396$; Group × Time interaction $F(1, 293) = 2.168$, $p = .142$, or age, Group $F(1, 293) = 1.205$, $p = .273$; time $F(1, 293) = 1.171$, $p = .280$; Group × Time interaction $F(1, 293) = 1.934$, $p = .165$.

ANALYSIS

Although random assignment of the officers should in theory equate the two groups, we sought reassurances by examining both the personal demographic characteristics of the officers as well as their effectiveness (i.e., recidivism rate) with clients prior to group assignment. Effectiveness with clients was determined by examining reoffending rates of retrospective clients (i.e., those who were supervised by the participating officers one year *prior* to their involvement in the study).

Next, the content of discussions and officer skills exhibited in recorded sessions by the experimental and control probation officers were compared. As the probation officers were randomly assigned to one of the two groups, data from the audiotapes were aggregated at the officer level. Mean scores for the content of discussion and skill variables were calculated for each officer regardless of the number of audiotapes submitted. Between-group statistical comparisons were made on this officer-aggregated data to evaluate the effects of the training on the behavior of the officers.

To evaluate the effects of participation in the clinical support activities, the third set of analyses examined, post hoc, the behavior of only those officers who were in the experimental group. In this set of analyses, we examined only the supervision sessions that were at least 270 days after the initial 3-day training was assessed. Probation officers were rated based on their involvement in the various clinical support activities, and an overall ongoing clinical support participation score was calculated. This overall score was correlated with various officer-level aggregated discussion content and intervention skill variables to examine the influence of the various ongoing clinical support activities on officer behavior.

The final set of analyses examined client recidivism. First, raw recidivism rates and the 95% confidence intervals were calculated for the retrospective and prospective clients of both the experimental and control group officers, and chi-square analysis was used to test for differences. However, it is recognized that prospective clients were not randomly selected. Those who were audiotaped were recruited by the officers from their case load, creating the possibility of participant selection effects on reoffending rates. For the

retrospective clients, even though they were randomly selected, there is possible bias as they were selected from historical lists. In response to these potential biases, Cox regression analysis was used to control for varying follow-up times as well as two key client characteristics that were available for all of the clients: risk as measured by the criminal history score of the LSI-R and age.

To increase the power of some of our statistical analyses, we constructed a larger comparison group by collapsing three sets of clients (retrospective clients of both the experimental and control group officers and the prospective clients of the control group officers). Essentially this group represented routine community supervision. Thus, we were able to compare the recidivism rates of the prospective clients supervised by the experimental officers to this larger comparison or routine supervision group using chi-square and Cox regression analyses.

Last, two additional analyses were conducted. One analysis examined the influence of the use of cognitive techniques on reoffending, and the second analysis examined the length of discussing probation conditions on reoffending.

RESULTS

THE INTEGRITY OF THE RANDOM ASSIGNMENT

With respect to the officers' personal demographics of age, gender, years of experience, and race, no significant between-group differences were found. Comparing the recidivism rate of the officers' retrospective clients, no significant differences on pretraining effectiveness, $\chi^2(1, N = 185) = 0.45$, $p = .503$, were found on the fixed 2-year recidivism rate between the clients supervised by the experimental officers (46.7%) and the clients supervised by the control group officers (41.5%). Furthermore, no significant differences were found using Cox regression survival analysis while statistically controlling for risk (i.e., the criminal history subsection of the LSI-R) and age (hazard ratio for group membership was .890; 95% CI = 0.581, 1.365, $p = .594$).

IMPACT ON PROBATION OFFICER BEHAVIOR

Given that random assignment was at the officer level and officers submitted multiple samples of their behavior with multiple clients, all content discussion and intervention skills data was aggregated for each officer across all of the audiotapes that were submitted. For content of discussion variables, the presence or absence measures for each discussion content area were averaged across all audiotapes and resulted in a mean percentage of sessions where that topic area was discussed. For the proportion of a session, this was aggregated across audiotapes and resulted in the mean proportion of each session. For the intervention skills, the data were also aggregated for each officer regardless of the number of audiotapes that officer submitted. As a result, for some officers, all of these aggregated variables may be based on a single posttraining audiotape (six officers submitted a single posttraining audiotape), whereas for other officers, the assessment was based on multiple audiotapes.

One concern regarding this aggregation was the potential influence of the number of audiotapes submitted by an officer. Pearson correlations of the number of tapes submitted

TABLE 2: The Content of Discussions

			Mean Percentage of Sessions				Mean Proportion of Each Session			
	Experimental	Control	Experimental		Control		Experimental		Control	
Discussion Area	n	n	M	SD	M	SD	M	SD	M	SD
Probation conditions	33	19	47.5	33.2	56.5	39.7	0.119	0.09**	0.268	0.26
Noncriminogenic	33	19	80.3	22.9	87.1	25.0	0.334	0.15*	0.490	0.22
Probation and noncriminogenic	33	19					0.412	0.17**	0.576	0.27
Any and all criminogenic needs	33	19					0.581	0.17*	0.434	0.27
Attitudes—All sessions	33	19	34.5	27.6**	2.4	7.4	0.133	0.12**	0.079	0.11
When that criminogenic need was identified on the risk-need assessment for the client . . .										
Attitudes	23	11	44.5	33.3*	14.3	33.2	0.128	0.11*	0.032	0.07
Personality	33	18	41.6	30.6	25.6	30.3	0.133	0.12	0.079	0.11
Peers	32	16	35.4	26.7	27.8	32.9	0.101	0.09	0.106	0.17
Family/Marital	30	12	58.2	34.1	46.4	37.8	0.225	0.19	0.210	0.24
Employment/Education	25	14	44.1	32.7*	69.3	37.7	0.156	0.15*	0.291	0.25
Substance Abuse	29	13	63.2	34.2	64.8	29.1	0.227	0.16	0.255	0.16
Leisure/Recreation	6	1	1.4	4.7	0.0	0.0	0.002	0.00	0.000	0.00

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

with the various discussion content variables found significant relationships with percentage of sessions discussing attitudes in general ($r = .416$, $p = .002$) and the following proportion of each session variables: noncriminogenic needs ($r = -.366$, $p = .008$), any and all criminogenic needs ($r = .302$, $p = .030$), attitudes in general ($r = .481$, $p = .000$), and attitudes when identified ($r = .367$, $p = .033$). The only intervention skill found to be significantly related to the number of audiotapes submitted was cognitive techniques ($r = .350$, $p = .011$). Between-group comparisons for these variables were computed using analysis of covariance. For all others, independent t tests were used.

Content of discussion. Table 2 presents the percentage of sessions, which measured the average percentage of sessions in which that topic was rated as discussed in at least one 5-min segment, and the proportion of each session, which measured the average proportion of session segments during which the topic was discussed. Consistent with the STICS model, the experimental group had significantly more sessions (i.e., percentage of sessions) where there were discussions on attitudes regardless of whether attitudes was identified as a need, $t(32) = 2.476$, $p = .019$) or not, $F(1, 49) = 17.4$, $p = .000$). Conversely, the control group officers had significantly more sessions discussing employment and education, $t(37) = 2.190$, $p = .035$. In terms of the length of a session devoted to particular topic areas (i.e., proportion of each session), the experimental group devoted a significantly greater proportion of their sessions to any and all criminogenic needs, $F(1, 49) = 4.084$, $p = .049$, procriminal attitudes both when identified as a criminogenic need for that client, $F(1, 31) = 4.624$, $p = .039$, and in general, $F(1, 49) = 13.3$, $p = .001$. The control group spent a significantly higher proportion of a session discussing employment and education, $t(37) = 2.106$, $p = .042$, and more time on the conditions of probation, $t(50) = 2.968$, $p = .005$, and noncriminogenic needs, $F(1, 49) = 5.055$, $p = .029$.

TABLE 3: Assessment of Probation Officer Skill Levels at Posttraining

	Experimental (n = *33*)		*Control* (n = *19*)	
	M	SD	M	SD
Structuring session	13.07	5.59**	8.92	3.69
Relationship-building skills	13.61	2.64**	11.56	2.21
Behavioral techniques	10.23	3.02	8.67	2.54
Cognitive techniques	1.58	2.21**	0.01	0.03
Effective correctional skills	38.49	11.38**	29.16	7.27

**$p < .01$.

Intervention skills. Significant between-group differences were found on four of the five constructs measured (see Table 3). The experimental officers demonstrated higher quality scores on structuring skills, $t(50) = 2.889$, $p = .006$, relationship-building skills, $t(50) = 2.851$, $p = .006$, cognitive techniques, $F(1, 49) = 5.737$, $p = .020$, and the global effective correctional skills, $t(50) = 3.206$, $p = .002$. Although the experimental officers demonstrated higher quality scores on *behavioral techniques* ($M = 10.23$) than the control officers ($M = 8.67$), this difference was not statistically significant, $t(50) = 1.891$, $p = .06$.

One of the primary goals of STICS training was to enhance the cognitive intervention skills of probation officers so they may better address procriminal attitudes and cognitions. Consequently, we examined how many officers had at least one discussion on attitudes with any of their clients and how many officers employed cognitive techniques at least once in the audiotapes that they submitted. There were significantly more experimental officers (75.8% of 33 STICS officers) than control officers (10.5% of 19 officers) who had at least one discussion with their clients on attitudes, $\chi^2(1, N = 52) = 20.55$, $p = .001$. Moreover, 69.7% of the experimental officers employed cognitive techniques compared to only one (5.3%) of the control officers, $\chi^2(1, N = 52) = 20.14$, $p = .000$.

PARTICIPATION IN CLINICAL SUPPORT ACTIVITIES

To evaluate the effects of participation in the clinical support activities, we assessed the officers' long-term skills and content of discussions by examining *only* those sessions that were recorded at least 9 months after the initial 3-day training during which most of the clinical support services were provided. A total of 76 audiotapes, submitted by 23 of the 33 experimental officers, met this criterion (10 officers submitted all of their data within 9 months of training, and their tapes were excluded in this analysis). Consistent with our previous analyses of the recording, the data were aggregated at the officer level.

The proportion of each session's discussion content and intervention skill variables were then correlated to the ongoing clinical support scores (see Table 4). Recognizing the small sample size ($n = 23$) and exploratory nature of these analyses, significant correlations were found for noncriminogenic needs ($r = –.455$, $p = .029$) and cognitive techniques intervention skill ($r = .464$, $p = .026$). Correlations approached significance (two-tailed $p < .10$) for procriminal attitudes ($r = .352$, $p = .099$) and substance abuse ($r = –.401$, $p = .099$).

IMPACT ON CLIENTS: RECIDIVISM

Our examination of offender recidivism begins with a pre–post training comparison of the recidivism of all clients using a fixed 2-year follow-up. The samples in this analysis

TABLE 4: Relationship of Clinical Support With Discussion and Officer Skills

		Proportion of Each Session			
	Ongoing Clinical Score	*Low* (n = *13)*		*High* (n = *10)*	
Discussion Area	r	M	SD	M	SD
Content areas					
Probation conditions	–.159	0.127	0.15	0.068	0.05
Noncriminogenic	–.455*	0.371	0.32	0.187	0.11
Probation and noncriminogenic	–.326	0.401	0.25	0.340	0.20
Any and all criminogenic needs	.293	0.594	0.25	0.644	0.18
Attitudes—All sessions	.352	0.101	0.13	0.231	0.19
Skills					
Structuring session	.239	10.0	7.3	14.4	6.6
Relationship-building skills	–.056	12.5	1.5	12.2	1.9
Behavioral techniques	.223	8.9	2.9	10.4	2.0
Cognitive techniques	.464*	0.7	1.0	3.7	3.5**
Effective correctional skills	.296	32.2	10.7	40.7	12.1

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

consisted of 120 retrospective clients and 75 prospective clients supervised by the experimental officers and 65 retrospective and 43 prospective clients supervised by the control group officers. For clients supervised by the experimental officers, the 2-year recidivism rate was 46.7% ($n = 120$; 95% CI = 37.7, 55.6) prior to training (i.e., retrospective clients of the experimental group) and 25.3% ($n = 75$; 95% CI = 15.5, 35.2) following training (i.e., prospective clients of the experimental group). For the clients supervised by the control group officers, the 2-year recidivism rate was 41.5% ($n = 65$; 95% CI = 29.6, 53.5) for their retrospective clients and 40.5% ($n = 37$; 95% CI = 24.7, 56.4) for their prospective clients. Overall, of the four recidivism rates presented, only two confidence intervals did not overlap; the recidivism rate of the clients supervised by the experimental officers prior to training (CI = 37.7, 55.6) and the recidivism rate of the clients after training (CI = 15.5, 35.2). This comparison was statistically significant, $\chi^2(1, N = 195) = 8.875$, $p = .003$. The same pre–post comparison for the control group was not statistically significant, $\chi^2(1, N = 102) = 0.010$, $p = .922$. In addition, there were no significant between-group differences (experimental vs. control group) on the recidivism rates of the retrospective clients, $\chi^2(1, N = 185) = 0.448$, $p = .503$, or on the recidivism rates of the prospective clients, $\chi^2(1, N = 112) = 2.710$, $p = .100$.

In the next set of analysis, recidivism was examined using Cox regression, which permitted us to include all the data (the minimum follow-up time was 354 days, and this was for the prospective clients of the experimental officers). We also allowed statistical controls for risk (i.e., the Criminal History subscale of the LSI-R) and age. Graphically, Figure 2 displays the survival curves for the recidivism of the retrospective and prospective clients of both the experimental and control group officers after statistically controlling for age and risk.

As Cox regression does not permit testing interaction effects (i.e., pre–post and trained–untrained), we examined the recidivism rates of the 143 prospective clients (100 experimental and 43 control) entering age, risk, and group (experimental or control) using forward stepwise entry with likelihood ratio. The final model showed that age (Wald = 9.582, $p = .002$, Exp(B) = 0.947; 95% CI = 0.915, 0.980) and risk (Wald = 22.15, $p < .000$, Exp(B) = 1.418;

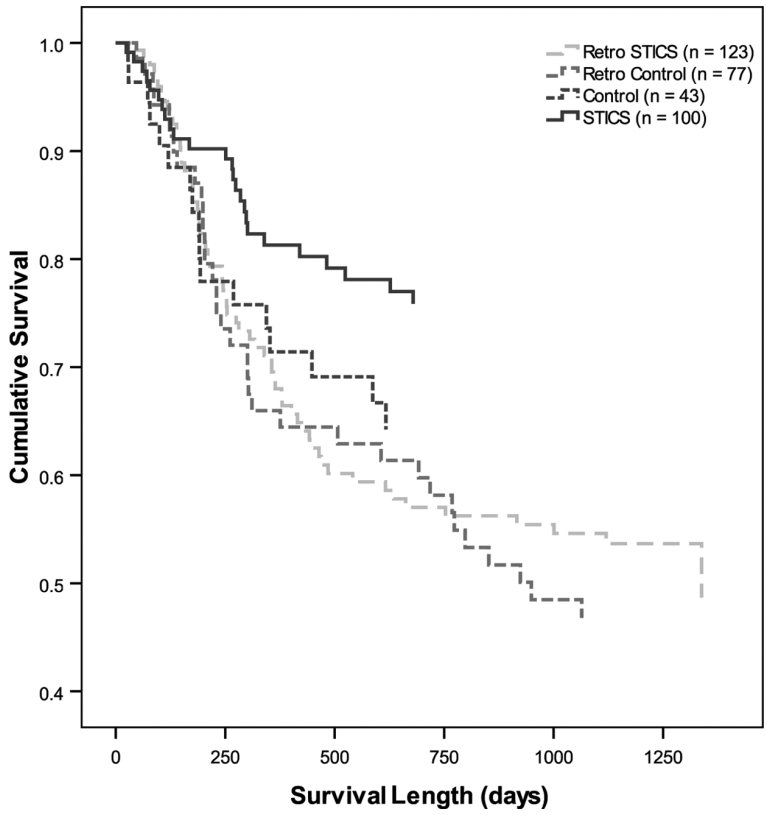

Figure 2: Survival of Retrospective and Prospective Strategic Training Initiative in Community Supervision and Control Clients Controlling for Age and Criminal History

95% CI = 1.226, 1.639) were significant predictors but group was not. In a subsequent analysis, we compared the recidivism rates of the prospective clients (n = 100) and retrospective clients (n = 120) for only the experimental probation officers. In this model, after adjusting for age and risk, both of which significantly predicted recidivism (for age, Wald = 15.923, $p < .000$, Exp(B) = 0.955; 95% CI = 0.934, 0.977; and for risk, Wald = 19.746, $p < .000$, Exp(B) = 1.258; 95% CI = 1.137, 1.391), posttraining clients were significantly less likely to reoffend (Wald = 5.874, $p = .004$, Exp(B) = 0.505; 95% CI = 0.315, 0.808).

In a set of analyses with a fixed 2-year follow-up, we increased statistical power by combining different sets of clients into a larger post hoc comparison sample. First, we examined the recidivism rates of all the clients who were exposed to routine supervision (i.e., supervised by untrained officers). These clients were the retrospective (n = 65) and prospective clients (n = 37) of the control group and the retrospective clients of the experimental officers (n = 120). A chi-square test of the recidivism rates indicated no statistical differences among these three groups of clients, $\chi^2(2, N = 222) = 0.684$, $p = .711$, with an overall recidivism rate of 44.1%. Examining the same three groups with Cox regression and statistically controlling for age (Wald = 9.159, $p = .002$, Exp(B) = 0.977; 95% CI = 0.963 to 0.992) and risk (Wald = 16.607, $p < .000$, Exp(B) = 1.193; 95% CI = 1.096 to 1.299), no significant between-group differences were found. As a result, we combined

all three of these groups of clients into a single post hoc comparison group of 222 clients. The 2-year recidivism rates were significantly different for the prospective experimental clients and the combined routine supervision sample (25.3% vs. 44.1%), $\chi^2(1, N = 297) = 8.309$, $p = .004$. Using Cox regression and controlling for age (Wald = 14.776, $p < .000$, Exp(B) = 0.974; 95% CI = 0.960, 0.987) and risk (Wald = 31.765, $p < .000$, Exp(B) = 1.250; 95% CI = 1.157, 1.352), the effect for clients supervised by the experimental officers was significant with the odds ratio of .515 (95% CI = .333, .798).

As the training emphasized the application of cognitive techniques to alter procriminal attitudes, we compared the 2-year recidivism rates for clients who were exposed to these techniques to clients who had no exposure. There were 42 prospective clients (41 clients supervised by the experimental officers and one client by a control group officer) with some exposure to cognitive technique, and their recidivism rate was 19.0% versus a rate of 37.1% for the 70 prospective clients (34 clients of the experimental officers and 36 clients of control group officers) without any exposure to cognitive techniques, $\chi^2(1, N = 112) = 4.07$, $p = .044$. Exposure to cognitive techniques was predictive of recidivism ($r = –.19$, $p = .044$), and its relationship to recidivism increased after controlling for risk and age (partial $r = –.24$, $p = .011$). Relationship-building skills ($r = .042$, partial $r = .086$), structuring skills ($r = .063$, partial $r = .046$), and the more general behavioral techniques ($r = .030$, partial $r = –.037$) were not related to recidivism.

Finally, we analyzed discussions of the probation conditions using only the first audio tape to be consistent with Bonta et al.'s (2008) analysis. The number of 5-min segments on the probation conditions was positively associated with recidivism after controlling for session length and offender risk (partial $r = .25$, $p = .052$). When we selected 15 min as a demarcation point, our sample size for cases with over 15 min ($n = 14$) was reduced, but the trend is informative. Sessions that had more than 15 min of discussions around probation conditions had higher recidivism for their clients than those discussions ($n = 97$) with less than 15 min (50.0% vs. 27.8%), $\chi^2(1, 111) = 2.83$, $p = .093$.

DISCUSSION

The RNR principles have been influential in our understanding of offender rehabilitation. However, applying the RNR principles to the everyday, one-on-one supervision of offenders has been challenging. This was clearly demonstrated in Bonta et al.'s (2008) study showing only moderate adherence to the principles by probation officers. Although there have been various training efforts to enhance the supervisory skills of probation officers (e.g., Trotter, 1996), few have used the RNR principles to guide the training. Furthermore, except for Robinson et al.'s (in press) study, there have been no other evaluations of officer training using a randomized experimental design (Telep, 2009). The STICS project attempted to address these gaps in the research.

THE BEHAVIOR OF THE PROBATION OFFICERS: WHAT THEY TALKED ABOUT AND THE APPLICATION OF INTERVENTION SKILLS

The results clearly showed that training had a significant impact on the behavior of the experimental probation officers. For the officers trained in the STICS model, increased adherence to the need principle was observed. Generalizing across all the audiotaped

sessions, discussions of procriminal attitudes were far more likely among the experimental group than the control group (39.1% vs. 6.7%; Table 2). This high rate was likely a product of the emphasis in training on how attitudes affect the other criminogenic needs. For example, if a client's criminogenic need was substance abuse, then the officer was encouraged to address the attitudes that underlie the problem (e.g., the attitude that one needs drugs to cope with life's problems).

For clients where attitudes were *specifically* identified by the risk–need assessment and would have attracted the attention of all probation officers, the experimental officers still had more of their sessions devoted to this criminogenic need as compared to the control officers (44.5% vs. 14.3%; Table 2). Even with this disparity, the control group's results showed a marked improvement over the Bonta et al. (2008) study, which found that attitudes, when identified as problematic, were discussed in only 8.8% of the supervision sessions. This near doubling in frequency may be good news, in that probation officers are beginning to recognize the importance of procriminal attitudes. However, as the results from the present study demonstrate, training can significantly enhance the attention probation officers give to this important criminogenic need.

In addition to increasing the frequency of discussions on attitudes, the trained officers spent proportionately more of their supervision sessions (0.58) discussing the criminogenic needs of their clients and less of their sessions on noncriminogenic needs and the probation conditions (0.41). Conversely, the control group spent proportionally less of their sessions on criminogenic needs (0.43) and more on topics contrary to the need principle (i.e., noncriminogenic needs and probation conditions; 0.58). In consideration of the general treatment literature and the RNR principles, such attention is counterproductive (Andrews & Bonta, 2010a, 2010b; Andrews, Bonta, & Hoge (1990)). Although probation officers have a duty to enforce the conditions of the court and to deal with crisis that may be noncriminogenic in nature, their time needs to be balanced with addressing the factors that are more directly related to criminal behavior. It is challenging to find an appropriate balance in the dual enforcement–helping relationship that many probation and parole officers have with their clients (Paparozzi & Gendreau, 2005; Skeem, Eno Louden, Polaschek, & Camp, 2007), but the present findings affirm the importance of finding the right balance.

When discussions around the seven individual criminogenic needs were examined, the trend favored the experimental group except for Employment/Education. It is unclear as to why the control probation officers were more predisposed to attend to this criminogenic need than the experimental officers. In the study by Bonta and his colleagues (2008), 57.1% of the sessions targeted this need area, approximately midway between the findings in the present study (48.0% vs. 69.6% for the experimental and control officers, respectively). It may be that the emphasis given to procriminal attitudes in the training shifted the experimental group's focus away from the Employment/Education domain.

Not only were there differences in the content of discussions between the experimental and control groups, but there were also differences in the application of RNR-based skills. First, analyses of the audiotapes found that the experimental officers showed better relationship-building skills and more use of cognitive techniques in addressing the client's criminogenic needs. Among the control probation officers, only one probation officer evidenced the use of a cognitive technique (compared to 23 or 69.7% of the trained officers). According to the responsivity principle, cognitive-behavioral interventions are

associated with recidivism reductions and should be encouraged. However, as suggested by the fact that only one probation officer showed such skills without training, specific training on these skills is clearly required. Robinson et al. (in press) also found that, among their U.S. community supervision officers, a meager 1% of the control group evidenced any use of what they called the "cognitive model." Even among their trained officers, the rate was only 17%, far below what was found in the STICS evaluation. In the present study, the only technique that did not discriminate the two groups was the general skill of behavioral techniques. The reasons for this may be that the construct had a relatively low alpha (.58) and that the construct was heavily influenced by such behaviors as the use of reinforcement and disapproval, which may have a high base rate (95%; Bonta et al., 2008).

CLIENT RECIDIVISM

Although the probation officers were randomly assigned and we can attribute the changes in officer behavior to the training, the posttraining probationers were not randomly sampled (however, the retrospective clients were randomly sampled). It may be argued that the experimental officers "cherry picked" their clients—thereby producing more favorable results—but this selection bias could also be applied to the control officers. With these caveats in mind, the various recidivism comparisons between the clients of the trained officers and the clients of officers who received routine services all point to a positive impact in favor of the trained officers. First, we found a decrease in the recidivism rates, with nonoverlapping confidence intervals, for the clients of the trained officers prior to and after training. There were no pre–post changes for the control group's clients. Second, the between-group differences in the fixed 2-year follow-up showed the experimental clients to have a reconviction rate 15 percentage points lower than the control group. This decrease mirrors the meta-analytic review of 11 "real-world" offender treatment studies (Andrews & Bonta, 2010a). Finally, a survival analysis that controlled for age and criminal history risk differentiated the clients of trained officers from the clients of the three untrained officer groups (i.e., control, retrospective control, and retrospective STICS).

The STICS training taught a variety of skills, and the data suggest two possible links between an officer's behavior and the behavior of the probationers. The first is the officer's use of cognitive skills. Controlling for offender risk level and age, cognitive techniques was associated with reduced recidivism ($r = -.24$). Given that only one officer in the control group showed such skills, it seems reasonable to conclude that the lower recidivism rate for the experimental group was a consequence of the application of cognitive techniques. Wampold (Ahn & Wampold, 2001; Wampold, 2007) has argued that a therapeutic relationship may be an essential ingredient to promoting positive change in clients. We agree that a positive rapport is important, and, in fact, this relationship factor is subsumed under the responsivity principle (Andrews & Bonta, 2010a; Andrews, Bonta, & Wormith, 2011). However, in this study relationship-building skills were not predictive of offender recidivism. The only intervention technique that predicted recidivism was cognitive techniques. The findings suggest that, for criminal offenders, cognitive-behavioral interventional skills play more of a critical role in reducing recidivism than relationship skills.

The other officer behavior that may have influenced recidivism was discussions around the probation conditions. Here the influence was in the negative direction. The more that probation officers discussed probation conditions, the higher the recidivism rate ($r = .25$).

This finding is congruent with the general offender treatment literature and even the larger psychotherapy literature. A preoccupation with the conditions of probation, or the enforcement role of the probation officer, interferes with the establishment of a therapeutic relationship between the helping professional and the client, thereby creating an obstacle to more directive intervention (Andrews & Bonta, 2010b; Bonta et al., 2008; Skeem et al., 2007; Trotter, 2006; Wampold, 2007).

Finally, the findings from the present study speak to the importance of ongoing skill development. The probation officers who received more clinical feedback and attended more of the monthly meetings and the refresher courses were more likely to demonstrate the skills that were taught in training and to focus their discussions on matters of importance (i.e., criminogenic needs). Similar findings have been reported in the training of motivational interviewing skills for staff working with substance abusing clients (Miller et al., 2004), family interventions with high-risk juvenile delinquents (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 2009), and general psychotherapists (Boswell & Castonguay, 2007). The effects of the clinical support were most directly seen in the demonstration of cognitive-behavioral skills, which are undoubtedly the most difficult skills to learn. In addition, the clients of the high-participation group also had a lower recidivism rate.

SUMMARY AND CONCLUSIONS

This study is the first experimental evaluation of a probation officer training program that follows the RNR principles. Although the findings were encouraging with respect to changes in officer behavior (i.e., greater adherence to the RNR principles and a trend to reduced recidivism in their clients), a number of caveats are warranted. The first caveat relates to the clients. Our sample size was small. The original intent of the STICS project was to involve more probation officers and clients, but for various reasons the numbers fell short of expectations. Thus, statistical power for the recidivism analysis was diminished with the between-group results only approaching statistical significance. In addition, the clients for the prospective recidivism analyses were not randomly selected, running the risk of sample selection bias. Our construction of the retrospective client samples and the application of statistical controls tried to address the potential for bias, but we recognize a need for replication through a larger study.

Second, all of the probation officers were volunteers. Random assignment may have introduced some level of control for motivation, but considering the one third drop-out rate, the effectiveness of STICS training with a nonvolunteer staff population needs to be tested. It is also likely that there are other methodological issues (e.g., the measurement constructs for audiotape coding, possible selection bias with client recruitment) that could have influenced the findings and our interpretation of the results. These issues are left for future research to disentangle.

We leave the reader with a few last thoughts. The RNR model has had an important influence on the development of group-based interventions for offenders. The evidence demonstrates that as adherence to the RNR principles increases, the rate of recidivism decreases. What has not been demonstrated until now is whether the principles apply to one-on-one supervision. The findings show that correctional staff can be trained to apply

the RNR principles in the direct supervision of their clients. Probation officers can improve their targeting of criminogenic needs, especially procriminal attitudes. They can also learn specific cognitive-behavioral intervention skills that help clients change their attitudes and cognitions and in turn decrease the likelihood of a return to crime. There are simply too many offenders who can be assisted by structured group RNR programs, and a hopeful avenue for increasing public safety is to help the staff that supervises offenders to be more effective in their work. This may be a challenge, but it is one that cannot be ignored.

REFERENCES

Abadinsky, H. (2009). *Probation and parole: Theory and practice.* Upper Saddle River, NJ: Pearson Prentice Hall.

Ahn, H., & Wampold, B. E. (2001). Where oh where are the specific ingredients? A meta-analysis of component studies in counseling and psychotherapy. *Journal of Counseling Psychology*, *48*, 251-257. doi:10.1037//0022-0167.48.3.251

Andrews, D. A., & Bonta, J. (1995). *The Level of Service Inventory–Revised.* Toronto, Canada: Multi-Health Systems.

Andrews, D. A., & Bonta, J. (2010a). *The psychology of criminal conduct* (5th ed.). New Providence, NJ: LexisNexis Matthew Bender.

Andrews, D. A., & Bonta, J. (2010b). Rehabilitating criminal justice policy and practice. *Psychology*, *Public Policy and Law*, *16*, 39-55. doi:10.1037/a0018362

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. (2011). The risk-need-responsivity (RNR) model: Does adding the good lives model contribute to effective crime prevention? *Criminal Justice and Behavior*, *38*, 735-755. doi:10.1177/0093854811406356

Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. C*riminology*, *28*, 369-404.

Annison, J., Eadie, T., & Knight, C. (2008). People first: Probation officer perspectives on probation work. *Probation Journal*, *55*, 259-271. doi:10.1177/026450508095122

Bonta, J., & Andrews, D. A. (2010). Viewing offender assessment and rehabilitation through the lens of the risk-need-responsivity model. In F. McNeil, P. Raynor, & C. Trotter (Eds.), *Offender supervision: New directions in theory*, *research and practice* (pp. 19-40). New York, NY: Willan.

Bonta, J., Rugge, T., Scott, T., Bourgon, G., & Yessine, A. (2008). Exploring the black box of community supervision. *Journal of Offender Rehabilitation*, *47*, 248-270. doi:10.1080/10509670802134085

Boswell, J. F., & Castonguay, L. G. (2007). Psychotherapy training: Suggestions for core ingredients and future research. *Psychotherapy: Theory*, *Research*, *Practice*, *Training*, *44*, 378-383. doi:10.1037/0033-3204.44.4.378

Dowden, C., & Andrews, D. A. (2004). The importance of staff practice in delivering effective correctional treatment: A meta-analytic review of core correctional practice. *International Journal of Offender Therapy and Comparative Criminology*, *48*, 203-214. doi:10.1177/0306624X03257765

Dowden, C., Antonowicz, D., & Andrews, D. A. (2003). The effectiveness of relapse prevention with offenders: A meta-analysis. *International Journal of Offender Therapy and Comparative Criminology*, *47*, 516-528. doi:10.1177/0306624X03253018

Gibbons, S. G., & Rosecrance, J. D. (2005). *Probation*, *parole*, *and community corrections in the United States.* Boston, MA: Pearson Allyn & Bacon.

Glaze, L. E., & Bonczar, T. P. (2007). *Probation and parole in the United States, 2006*. *Bureau of Justice Statistics Bulletin.* Washington, DC: U.S. Department of Justice, Office of Justice Programs.

Henggeler, S. W., Schoenwald, S. K., Borduin, C. M., Rowland, M. D., & Cunningham, P. B. (2009). *Multisystemic treatment of antisocial behavior in children and adolescents* (2nd ed.). New York, NY: Guilford.

Lipsey, M. W. (1995). What do we learn from 400 research studies on the effectiveness of treatment with juvenile delinquency? In J. McGuire (Ed.), *What works: Reducing reoffending*, *guidelines from research to practice* (pp. 63-78). West Sussex, UK: John Wiley.

Lipton, D., Martinson, R., & Wilks, J. (1975). *The effectiveness of correctional treatment: A survey of treatment evaluation studies.* New York, NY: Praeger.

Martinson, R. (1974). What works? Questions and answers about prison reform. *Public Interest*, *35*, 22-54.

McMurran, M. (2009). Motivational interviewing with offenders: A systematic review. *Legal and Criminological Psychology*, *14*, 83-100.

Miller, W. R., Yahne, C. E., Moyers, T. B., Martinez, J., & Pirritano, M. (2004). A randomized trial of methods to help clinicians learn motivational interviewing. *Journal of Consulting and Clinical Psychology*, *72*, 1050-1062. doi:10.1037/0022-006X.72.6.1050

Ogloff, J. R. P., & Davis, N. R. (2004). Advances in offender assessment and rehabilitation: Contributions of the risk-needs-responsivity approach. *Psychology, Crime & Law*, *10*, 229-242. doi:10.1080/0683160410001662735

Paparozzi, M. A., & Gendreau, P. (2005). An intensive supervision program that worked: Service delivery, professional orientation, and organizational supportiveness. *Prison Journal*, *85*, 445-466. doi:10.1177/0032885505281529

Paul, J., & Feuerbach, L. (2008). A changing role: Perspective from two officers. *Federal Probation*, *72*, 77-79.

Pew Center on the States. (2009). *One in 31: The long reach of American corrections.* Retrieved from www.pewcenteronthestates.org.

Robinson, C. R., Vanbenschoten, S., Alexander, M., & Lowenkamp, C. T. (in press). A random (almost) study of Staff Training Aimed at Reducing Re-arrest (STARR): Reducing recidivism through intentional design. *Federal Probation.*

Skeem, J. L., Eno Louden, J., Polaschek, D., & Camp, J. (2007). Assessing relationship quality in mandated community treatment: Blending care with control. *Psychological Assessment*, *19*, 397-410. doi:10.1037/1040-3590.19.4.397

Stemen, D. (2007). *Reconsidering incarceration: New directions for reducing crime.* New York, NY: Vera Institute of Justice. Retrieved from http://www.vera.org/publications

Telep, C. D. (2009). Citation analysis of randomized experiments in criminology and criminal justice: A research note. *Journal of Experimental Criminology*, *5*, 441-463. doi:10.1007/s11292-009-9082-8

Trotter, C. (1996). The impact of different supervision practices in community corrections. *Australian and New Zealand Journal of Criminology*, *29*, 1-18.

Trotter, C. (2000). Social work education, pro-social orientation and effective probation practice. *Probation Journal*, *47*, 256-261.

Trotter, C. (2006). Working with involuntary clients: A guide to practice (2nd ed.). Crows Nest, Australia: Allen & Unwin.

Walmsley, R. (2009). *World prison population list* (8th ed.). Retrieved from http://www.kcl.ac.uk/depsta/law/research/icps/downloads/wppl-8th_41.pdf

Walters, S. T., Matson, S. A., Baer, J. S., & Ziedonis, D. M. (2005). Effectiveness of workshop training for psychosocial addiction treatment: A systematic review. *Journal of Substance Abuse Treatment*, *29*, 283-293. doi:10.1016/j.jsat.2005.08.006

Wampold, B. E. (2007). Psychotherapy: The humanistic (and effective) treatment. *American Psychologist*, *62*, 857-873.

Ward, T., Melser, J., & Yates, P. M. (2007). Reconstructing the risk-need-responsivity model: A theoretical elaboration and evaluation. *Aggression and Violent Behavior*, *12*, 208-228. doi:10.1016/j.avb.2006.07.001

James Bonta began his career as a clinical psychologist in a maximum security remand center before becoming director of corrections research with Public Safety Canada. His interests are risk assessment and offender rehabilitation. One of his latest publications is *The Psychology of Criminal Conduct* (with D. A. Andrews), now in its fifth edition.

Guy Bourgon, PhD (University of Ottawa), is a clinical psychologist with extensive experience in the assessment, treatment, development, and evaluation of correctional programs. He is presently a senior researcher for Public Safety Canada, maintains a private practice, and is an adjunct professor at Carleton University.

Tanya Rugge (BA law, PhD psychology, Carleton University) is currently a senior research advisor at Public Safety Canada. Over the years she has interviewed numerous offenders and victims, conducted risk assessments, worked clinically with female offenders, and conducted research on recidivism, Aboriginal corrections, and restorative justice programs as well as community supervision practices.

Terri-Lynne Scott, MA, is a research manager at the Correctional Service of Canada, where she conducts research pertaining to operational issues within corrections.

Annie K. Yessine received her PhD in psychology at Carleton University in 2008. She joined the National Crime Prevention Centre as a senior research analyst in 2009. Prior to this, she worked as a research assistant for the Correctional Service of Canada and Public Safety Canada. Her primary interests are in developmental trajectories of offending and risk identification, assessment, and prediction among youth.

Leticia Gutierrez, MA, is a research analyst in the Corrections Research Unit of the Department of Public Safety and a second-year PhD student in the Forensic Psychology program at Carleton University. Her areas of research include problem-solving courts, community supervision, and aboriginal offenders.

Jobina Li is a research analyst with Public Safety Canada's National Crime Prevention Centre (NCPC), where she is currently involved in several projects on crime prevention, economic analysis, youth violence, and Aboriginal communities. Prior to joining the NCPC, she was part of the research team in the Corrections Research Unit.