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Targeting recidivism : an evaluation study into the functioning and effectiveness of a prison-based treatment program

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1 Introduction[■]

1.1 BACKGROUND

Driven by high post-release recidivism rates among ex-detainees (Fazel & Wolf, 2015; Hughes & Wilson, 2002; Langan & Levin, 2002; SEU, 2002; Wartna et al., 2010), and inspired by evidence showing that rehabilitation programs can effectively help decrease re-offending rates among former incarcerated offenders (see e.g. Andrews et al., 1990; Cullen & Gendreau, 2001; Gendreau, Cullen & Bonta, 1994; McGuire, 1995; McGuire & Priestley, 1995; Andrews, 1995), governments of many Western countries turned to implementing correctional rehabilitation programs aimed to deter offenders from future criminal behavior. In The Netherlands, this led to the nation-wide implementation of the *Prevention of Recidivism Program*: A prison-based rehabilitation program aimed to decrease post-release re-offending rates among detainees with a prison sentence of at least 4 months (Dutch Prison Service & Dutch Probation Organizations, 2007).

To date, much is unknown about the functioning and effectiveness of the Prevention of Recidivism Program. As a result, on a large scale, incarcerated offenders have been exposed to a rehabilitation program for which we do not know the exact consequences. The program has not been evaluated and it is therefore unknown if it was successful in reaching its aim: reducing post-release re-offending among program participants. The current study aims to overcome this lack in knowledge by addressing the functioning and effectiveness of the Prevention of Recidivism program. The overall research questions are: (1) *To what extent is the Prevention of Recidivism Program effective, based on theoretical and empirical knowledge?* (2) *To what extent is the Prevention of Recidivism program functioning according to plan?* And (3) *To what extent is the Prevention of Recidivism Program effective in reducing post-release re-offending rates among program participants?* To examine the research questions proposed, this study uses a population-based sample consisting of 3.981 offenders that were included in the Prison Project: A large scale, longitudinal research project, studying the effect of imprisonment on the life of detainees and their families in The Netherlands.¹

■ An extended version of Paragraph 1.5 was published in Dutch as: Bosma A. Q., Kunst, M. J. J. & Nieuwbeerta, P. (2013). Rehabilitatie in Nederlandse gevangenis: Wat is de stand van zaken ten aanzien van de uitvoering en doelmatigheid van het programma Terugdringen Recidive? *Tijdschrift voor Veiligheid*, 3, 3-19.

1 The Prison Project is financially supported by the University of Leiden, The Netherlands Institute for the Study of Crime and Law Enforcement (NSCR), The Netherlands Organization for Scientific Research (NWO) and Utrecht University. The study protocol was submitted to and reviewed positively by the Ethical Committee for Legal and Criminological research of the VU University Amsterdam.

By doing so, this study responds to a growing emphasis on implementing *evidence-based* correctional practices; the movement towards the use of practices which were found effective in preventing future criminal behavior (Day & Howells, 2002; Latessa, 2004; MacKenzie, 2000; 2001). Consequently, evaluation studies are needed to assess the effectiveness of correctional programs. Most evaluation studies have however merely focused on the outcomes of such programs (Todd & Wolpin, 2008), with little attention being paid to the processes by which results were accomplished (Burton, Goodlad & Croft, 2006; Lipsey, Petrie, Weisburd & Gottfredson, 2006). A comprehensive evaluation approach would involve conducting a plan evaluation, a process evaluation, and a product evaluation. This way, it can be (a) assessed if a program is designed in accordance with theoretical insights and empirical knowledge; (b) determined if a program is delivered properly; and (c) can be evaluated if a program is successful in reaching its aims.

1.2 THE PREVENTION OF RECIDIVISM PROGRAM

Rehabilitation has been a central part of the Dutch penal policy since post-war times (Boone, 2011). According to section 2 of the Dutch Penitentiary Principles Act, a prison sentence must, as much as possible, be dedicated to preparing a detainee for re-entry in society.² This is the so-called re-socialization assignment, which has been incorporated in the Penitentiary Principles Act since it was first introduced in 1953, by which imprisonment is specifically defined as a measure that is imposed to rehabilitate offenders, instead of being a measure solely intended as retribution and/or punishment. It provides a legal foundation for a variety of activities and measures that can be imposed upon detainees, such as labor, education, furlough, phased re-entry, and also prison-based treatment programs. A clear manifestation of the Dutch re-socialization assignment is the implementation of the Prevention of Recidivism Program. The Prevention of Recidivism Program was developed within the scope of a governmental policy program (*to a safer society*) in 2002. It was then further developed and tested in various pilot-areas, after which it was implemented nation-wide in 2007.

The Prevention of Recidivism Program is a prison-based rehabilitation program meant for detainees with a prison sentence of at least 4 months (i.e. their remaining prison sentence at the moment of convicted, which is the total sentence imposed minus the time spent in pre-trial detention). It was inspired by the *Risk-Need-Responsivity model* [RNR] of crime prevention and correctional rehabilitation (Andrews et al., 1990), which suggests that risk- (who should be treated), need – (what should be treated) and respon-

2 Note that the section 2 of the Penitentiary Principles Act has been restricted in 2014, re-socialisation opportunities are from then on dependent on an offender's (pro-social) behavior, and the interests of victims have to be taken into account when offenders are considered for early (conditional) release (Boone & Van Hattum, 2014).

sivity – (how should it be treated) factors influence correctional rehabilitation outcomes. In line with the RNR-model, the program aimed to reduce re-offending rates among participants by assessing an offender’s risk for recidivism and individual criminogenic needs (factors that were shown related to repeated offending) based on which, if indicated by an offender’s risk and need scores, specific treatment modules are applied (such as substance abuse treatment) that address those criminogenic needs (Van der Linden, 2004). Detainees who participated in the program were eligible for phased re-entry and could, in the final stages of their prison sentence, be placed in (half) open prison facilities where they had more privileges and security measures were less strict. Detainees who decided not to participate in the program had to spend the remainder of their detention period in a fully guarded correctional facility with limited or no options to go on leave (Dutch Prison Service & Dutch Probation Organizations, 2007).

The Prevention of Recidivism Program officially ended in March 2014. However, its main components, the application of risk-need based treatment modules, are still in practice today. This study therefore evaluated the Prevention of Recidivism Program, and the treatment modules that were implemented within its scope.

The Prevention of Recidivism Program working process in detail

In this paragraph, the entire Prevention of Recidivism Program process – from program qualification to program completion, and possibly recidivism – is described. To visually aid this narrative, the path through the various junctures leading up to program completion is visually represented in Figure 1. Note that the empirical chapters included in this dissertation (Chapter 3 up to 7) are structured accordingly.

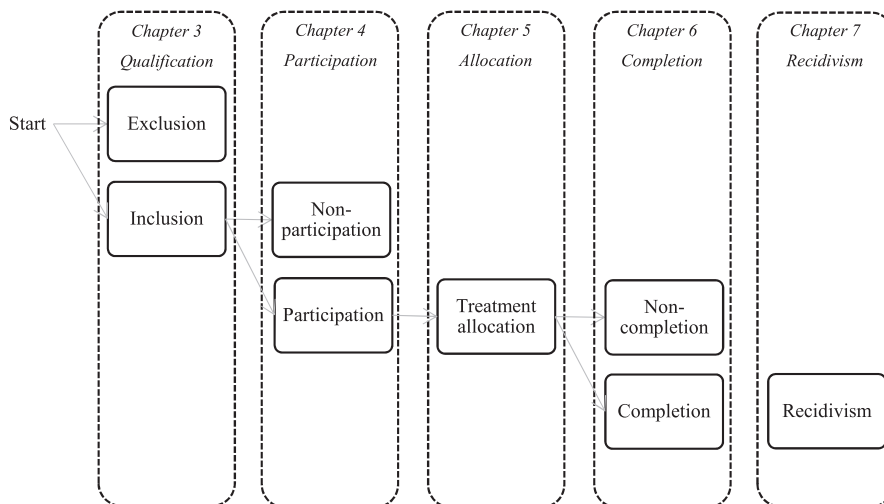


Figure 1. The Prevention of Recidivism Program in stages

Program *qualification* is determined at the moment an offender is convicted by a judge. Eligible detainees are automatically recognized with help of the application TRIS (Trajectory Information System: the official Prevention of Recidivism Program registration system accessible and used in every penitentiary institution in The Netherlands). Offenders are assigned by TRIS as a candidate if their remaining prison sentence at the moment of sentencing (which is the total sentence minus the time spent in pre-trial detention) is equal to or larger than four months, and if they are not excluded based on objective criteria, such as a life-sentence (Dutch Prison Service & Dutch Probation Organizations, 2007).

Program *participation* is the next step. If an offender is assigned a candidate, the Prevention of Recidivism Program Coordination Bureau is informed of this new candidate and assigns a probation officer and program-counselor (prison-employee) to the case. This program-counselor visits the detainee, informs the detainee about the program, and determines if there are any exclusion criteria present that prevent participation (such as insufficient Dutch language skills or not enough motivation to take part). The counselor then asks the detainee to participate in the program; if a detainee decides to participate a participation statement is signed. If the detainee decides not to take part a refusal statement is signed, and a selection officer (prison employee that is responsible for placement advices, with which is determined in which prison and under which regime an offender will be detained) will advise to place the uncooperative detainee in a fully guarded prison facility. In case of participation, a selection officer makes a placement-advice regarding prison and type of regime, which will usually include some sort of phased re-entry, in which an offender is gradually granted more freedom by being placed in half-open and open prison regimes in the final stages of a prison sentence (Dutch Prison Service & Dutch Probation Organizations, 2007).

If an offender has decided to take part in the program, risk assessment information is for the *allocation* of an offender to criminogenic need-specific treatment modules. To do so, the program counselor will first check if a recent (not older than one year) risk assessment is available (which was, for example, used in light of a previous court appearance). If available, this risk assessment will be used. If no (recent) risk assessment is available, the Dutch probation organization will be asked to make a (new) assessment (for which a standardized instrument, the RISc, is used nationwide; Dutch Prison Service & Dutch Probation Organizations, 2007). Based on all the information gathered, the program-counselor and probation officer together will prepare a concept re-integration plan. This concept re-integration plan contains the final placement-advice and specifies which aftercare needs have to be organized during detention (on the target areas identity documents, income, housing, and health care). But most important, the re-integration plan prescribes, if risk assessment outcomes indicate this, in which criminogenic need-specific behavioral modules offenders need to participate during detention (Cognitive Skills Training, Lifestyle Training

for Addicted Offenders, Job Skill Training, and Aggression Replacement Training). The concept re-integration plan has to be drawn up within four weeks post-verdict. It is then discussed with the detainee in question, after which it is formalized (Dutch Prison Service & Dutch Probation Organizations, 2007) and carried out.

Program *completion* takes place at the end-date of a detainee's sentence, at what time all activities planned have been carried out. During this (intra-mural) stage, the program-counselor has the role of case-manager. Besides monitoring every activity related to the Prevention of Recidivism Program, the program-counselor maintains contact with other stakeholders, keeps in close contact with the detainee, motivates the detainee to attend and engage in behavioral modules (if applicable) and monitors the progress of the re-integration plan. If situations occur that call for adjusting the re-integration plan, the program-counselor can in consultation with the probation officer, do so. Towards the end of the intramural phase, most detainees are eligible for phased re-entry and have the option to go on leave. If a participating offender decides to withdraw participation, before the end-date of their sentence, the program-counselor (and other prison-personnel) will try to motivate the offender to resume or restart their program. If an offender does not wish to do so and drops out, agreements regarding phased re-entry and furlough are canceled (Van der Linden, 2004; Dutch Prison Service & Dutch Probation Organizations, 2007; Balogh & Jans, 2009).

As the program aims to reduce post-release re-offending rates among program participants, *recidivating* after release is anticipated to not occur after an offender is discharged from prison. To attain this, the Prevention of Recidivism Program may in some cases also contain an extramural phase. In this extramural (and final) phase of the program, offenders may take part in a so-called penitentiary program, which means that an offender serves the final months of his or her sentence at home (or in housing facilities for ex-detainees, such as an Exodus house), under supervision of the Dutch probation service, and takes part in rehabilitation activities (for a minimum of 26 hours a week) directed at re-socialization and re-entry. For some offenders, taking part in a penitentiary program forms the final stage of a prison sentence, after which they are released (sometimes under special conditions). For most offenders however, the Prevention of Recidivism program is concluded the moment they exit prison.

Recent developments

The Prevention of Recidivism Program ended in March 2014. Abolishment of the program was instigated by a series of policy measures introduced that were mainly driven by cutbacks in government spending and a political climate that favored more punitive conditions of confinement in The Netherlands. The new policy measures introduced did not so much change the process of assessing risk and needs and applying behavioral modules that match an offender's individual risk and need assessment outcomes, but did alter the target population of offenders eligible for rehabilitation. As of

the beginning of March 2014, each offender detained in The Netherlands is detained under a basic regime. This basic regime is sober, and is intended to motivate an offender to think about (and make plans for) desisting from crime, to set up a detention and re-integration plan, and to work towards a promotion to the plus-regime. This plus-regime can be earned by showing good behavior for a minimum of six weeks straight. In the plus-regime, which is only available in prisons (as opposed to remand centers, which means it is not available for offenders detained in pre-trial detention), a detainee gets to spend 5 extra hours a week on out-of-cell activities such as education, visits, and rehabilitation (which is still based on risk assessment and entails the same programs as were operative under the umbrella of the Prevention of Recidivism Program). Offenders that have been promoted and are detained under a plus-regime can carry out the activities that were laid out in their detention and re-integration plan (which they have set up during their stay in the basic-regime), such as assistance with aftercare (on the target area's work and income, healthcare, housing, debt and identification papers; which was previously available for all detainees), and rehabilitation programs (which up to March 2014 have been part of the Prevention of Recidivism Program). If a promoted offender misbehaves, he or she can be demoted back to the basic-regime. Phased re-entry, or placement in a half-open facility, is only available for detainees that are detained under a plus-program. By implementing a promotion/demotion system the Dutch government wishes to reward detainees for good behavior and taking responsibility. A large consequence of this approach is that rehabilitation programs are nowadays only available to offenders that have shown they are motivated to change their criminal ways, and are capable of showing good behavior.

Although under the current policy perhaps a slightly different (more narrow) research population of offenders is included in treatment, since offenders can only take part in treatment if they had shown pro-social behavior and have shown to be motivated to change their delinquent ways, the current rehabilitation practices in Dutch prisons involve the same risk- and need based approach that was functioning within the scope of the Prevention of Recidivism Program: A study into the functioning of the Prevention of Recidivism Program is therefore also insightful for correctional rehabilitation practices carried out today.

1.3 TOWARDS EVIDENCE BASED PRACTICES: EVALUATION STUDIES

As mentioned, this study will evaluate the Prevention of Recidivism Program. Evaluation studies are an important method in determining the extent to which a program (or policy) is meeting its objectives and to assess if those intended to benefit have done so. It can uncover good practices and can identify ways in which programs and policies need to be improved or developed to increase its outcomes (National Audit Office, 2001). Most evaluation

research focused on the outcomes of existing policy programs (in terms of efficiency or effectiveness); ex-post evaluations or *product evaluations* (Todd & Wolpin, 2008). With this so-called *black box* approach (in which a study merely evaluates what goes in to a program, and what comes out of it, without assessing what happens inside a program; see e.g. Simpson, Joe, Rowan-Szal & Greener, 1997; Taxman & Bouffard, 2000) little attention is paid to the processes by which outcomes are accomplished (Burton, Goodlad & Croft, 2006; Lipsey, Petrie, Weisburd & Gottfredson, 2006). A more comprehensive evaluation approach is necessary to not only assess the outcomes of a policy measure, but also assess the mechanism through which goals were achieved, and take into account factors relating to the way a program was delivered. There are several steps included in such a broad approach to evaluation research (see e.g. Van Ooyen-Houben & Leeuw, 2010). These include: a plan evaluation, a process evaluation, and a product evaluation.

Plan evaluation

Plan evaluation (or ex-ante evaluation) aims to assess what results of a treatment program may be expected, based on the program plans laid out. These expected results are estimated by assessing if the supposed mechanisms are congruent with what we know based on theoretical and empirical evidence (Wartna, 2009), it therefore requires extrapolating from general theories, previous empirical studies and past experiences to assess the effects of a program (Todd & Wolpin, 2008). Ideally, a plan evaluation is conducted prior to implementing a program. This is useful because the potential effectiveness of a policy measure can then be estimated before program introduction, thereby avoiding the high costs and negative consequences of implementing an ineffective measure (Todd & Wolpin, 2008). Plan evaluations can however also be insightful when conducted after a policy measure has been implemented. For example, because it can provide an explanation for why a program may have no or negative effects, and can give arguments to change a certain aspect of a program or practice. There are different approaches to plan evaluation (see e.g. Klein Haarhuis, Smit & Keulemans, 2014). The most commonly applied is the reconstruction of program theory (Leeuw, 2003). In a program-theory reconstruction, all explicit and implicit assumptions and theories underpinning a program are mapped (based on documents such as policy information and program manuals). These assumptions can then be tested to theoretical and empirical knowledge.

Process evaluation

Ever too often, outcome studies that find no effect will attribute this lack of outcome to the failure of the underlying program (Sherman et al., 1997). However, poor results may have also been caused by inadequate program delivery, or can emerge because the appropriate target population was not reached. A lack of program-effectiveness is then not a result of an ill-designed program, but is caused by poor program delivery (Bouffard, Taxman & Silverman, 2003). A process evaluation (or formative program

evaluation) is meant to provide insight in these matters. It basically aims to assess if a program was carried out as it was intended (see e.g. Bouffard, Taxman & Silverman, 2003; Van Ooyen-Houben & Leeuw, 2010). This is a vital component of assessing program effectiveness (Bouffard, Taxman & Silverman, 2003; Gottfredson, 1984). It touches upon the internal validity of a program by assessing the degree to which a program is implemented as designed or intended. It is also a direct measure of program integrity (factors associated with program implementation, such as quality of delivery; Andrews, 2006), a principle that was shown related to effective rehabilitation (Gendreau, 1996; Lipsey & Cullen, 2007; Palmer, 1995). There are various strategies to conducting a process evaluation, such as conducting stakeholder interviews, systematic social observation (direct observation in an actual setting) but also gathering of program fidelity measures (such as official number of program participants, program content, etc.), in which researchers rely solely on quantitative statistics to assess program implementation, instead of using more qualitative measures (Bouffard, Taxman & Silverman, 2003).

Product evaluation

The final step of program evaluation is to determine if a program has actually reached the desired outcomes, and to assess if the program has caused these outcomes. A product evaluation (or effect evaluation) aims to gain insights in the effectiveness of a program or practice (Cook & Campbell, 1979; Rossi, Freeman & Lipsey, 1993; Swanborn, 1999). A proper product evaluation for testing causality will be conducted, in an ideal world, by use of a randomized controlled experiment [RCT]. In an RCT subjects are randomly assigned to a treatment or control condition, after which, through pre- and post-program measures, it can be assessed if a program has had the desired outcome. The randomized experiment is generally considered the strongest experimental design for testing a causal relationship (Farrington, 2003; Sherman et al., 1997; Welsh et al., 2002). It is however very difficult to apply in practice because of practical, legal en ethical objections. For example, if we want to randomly assign some offenders to a prison sentence, and others to community service, offenders sentenced to prison are clearly disadvantaged, which would perhaps not be fair. An alternative is to assess program effectiveness by use of a quasi-experimental design. This method is similar to a true experiment (and therefore includes a treatment- and control group, and pre- and post-program measures), except for the fact that subject are not randomly assigned to conditions. Statistical analyses then have to be applied to control for other factors that were perhaps correlating with treatment- or control-condition group membership and/or program-outcomes (Sherman et al., 1998; Farrington, Gottfredson, Sherman & Welsh, 2002).

1.4 THEORETICAL FRAMEWORK

Program effectiveness: rehabilitation theories

Rehabilitation is based on the premise that, in addition to specific deterrence, the purpose of punishment is rehabilitation; turning law-breaking citizens into law-abiding ones. It presumes that criminal behavior is caused by psychological and social factors that differ from one individual to another. And assumes that future crime can be prevented if these crime-causing factors are eliminated, in which the correctional system can play a central role (Cullen & Gendreau, 2000; Sechrest, White & Brown, 1979). Rehabilitation theories specify the mechanisms through which treatment programs can help to decrease post-release re-offending among program participants. The two dominant rehabilitation theories are the Risk-Need-Responsivity model (Andrews, Bonta & Hoge, 1990) and Good Lives Model (Ward & Brown, 2004).

The *Risk-Need-Responsivity* model [RNR] of crime prevention and correctional rehabilitation (Andrews, Bonta & Hoge, 1990) is a psychological model that suggests that, in order to be effective, a rehabilitation program should adhere to three core principles; risk, need and responsivity. The *risk* principle indicates that treatment intensity should be adjusted to the extent to which there is risk for re-offending. The *need* principle asserts to the premise that correctional programs should address criminogenic needs, i.e. dynamic characteristics that have shown to be directly related to re-offending rates. And finally, the *responsivity* principle suggests that interventions should match an offender's characteristics, such as an offender's motivation to engage in treatment. In other words, the model gives direction to *who* should be treated (risk), *what* should be treated (need) and *how* it should be treated (responsivity) (Andrews & Bonta, 2010; Andrews, Bonta & Wormith, 2006; Andrews et al, 1990; Andrews & Dowden, 1999; Lowenkamp & Latesa, 2005). To principle of *program integrity*, added to the model at a later date (Andrews, 2006), relates to program design, implementation, and delivery. It is argued that effective programs should be based on theories that explain criminal behavior, use methods that were shown effective in past empirical studies and are delivered according to plan, which also includes selecting the proper (such as including high-risk offenders) participants (Andrews & Dowden, 2005; Hollin, 1995; Leschied, Bernfeld & Farrington, 2001; Moncher & Prinze, 1991; Van der Laan, 2004).

The RNR-model is theoretically grounded by the General Personality and Cognitive Social Learning perspective of criminal behavior (Andrews & Bonta, 2006), which proclaims that criminal behavior represents a personality predisposition, that is learned in a social environment, and is governed by the anticipated costs and actual rewards of offending behavior (for further reading, see: Andrews & Bonta, 1998; Andrews & Bonta, 2006; Bonta, 2002; Bonta & Andrews, 2007). The costs and rewards for criminal behavior can be provided by others, or can stem from within the person or the behavior itself (Andrews & Bonta, 1998; Andrews & Bonta, 2006; Bonta, 2002; Bonta & Andrews, 2007). Criminogenic needs (factors that were shown

related to future re-offending, and therefore need targeting) are in essence characteristics that indicate rewards for criminal behavior, such as having antisocial peers, a drug- or alcohol addiction, or lacking a stable income, as opposed to pro-social behavior. (Andrews, Bonta & Wormith, 2011). In line with the General Personality and Cognitive Social Learning Perspective of Criminal Behavior, a correctional treatment program can be effective in reducing future re-offending if it is able to reduce or remove these criminogenic needs.

A second rehabilitation theory that is often marshalled to explain the mechanisms through which correctional treatment can effectively decrease re-offending rates among offenders is the *Good Lives Model* [GLM] of offender rehabilitation (Ward & Brown, 2004). The GLM is a so-called strength-based model (Whitehead, Ward & Collie, 2007), and proclaims that criminal re-offending can be prevented if a program is able to enhance an offender's capabilities to attain certain human goods (life; knowledge; excellence in play; excellence in work; excellence in agency; inner peace; friendship; community; spirituality; happiness; and creativity; Ward & Stewart, 2003). Concrete ways are needed to acquire these goods, for example, in order to excel at work, one has to have a job. An offender's probability of attaining human goods depend on the possession of internal capabilities (skills, attitudes, beliefs) and external conditions (opportunities, support), and can be frustrated or blocked by criminogenic needs (Ward & Gannon, 2006; Ward & Stewart, 2003). According to the model, offending behavior can be caused by the absence of legitimate ways to attain personal goods, or can be the result of conflicting goods. Consistent with the GLM, correctional programs program are regarded to be effective in reducing future re-offending if it is able to enhance an offender's skill to acquire personal goods.

Program integrity: other perspectives

In addition, the impact of any rehabilitation program is not solely dependent on program-design. Often, a lack in impact (or effectiveness if you will) can be attributed to the way a program is carried out in practice (program-integrity). Several theoretical notions point to that.

First, a major issue for (prison-based) treatment programs is treatment engagement (i.e. participation and completion). Often, a selective group of offenders do not engage in or complete the treatment program they were referred to. Previous work has suggested that treatment in correctional rehabilitation programs may be explained by focusing on an offender's willingness and suitability to participate in treatment (Howells & Day, 2003; Ward, Day, Howells & Birgden, 2004; Williamson, Day & Howells, 2003). A model that is believed to explain this relationship is the *Multifactor Offender Readiness Model* [MORM] (Ward et al, 2004). This model is based on the concept of treatment readiness, defined as the presence of characteristics within the client and/or therapeutic situation that endorse therapeutic engagement and behavioral change (Serin & Kennedy, 1997; Serin, 1998). According to MORM, An offender that can be considered treatment ready is (a) motivated;

(b) able to respond to treatment; (c) finds treatment meaningful; and (d) has the capacities to successfully enter and complete correctional programs (Casey, Day & Howells, 2005; Howells & Day, 2003; McMurren & Ward, 2010; Ward et al, 2004). The model specifies that an offender's treatment readiness is determined by a number of internal characteristics (affective, volitional, behavioral or identity-related) and external factors (circumstances, opportunities, resources, interpersonal support and program characteristics), which, if present, allow offenders to effectively engage in and benefit from correctional treatment programs (McMurren & Ward, 2010; Ward et al, 2004). Based on the MORM, it is expected that offenders who are ready for treatment will be more likely to successfully engage in (participate in and complete) treatment programs that aim to help them desist from criminal behavior.

Second, program effectiveness can be hampered by the incorrect referral of offenders to specific types of programs. As mentioned, in order to effectively apply correctional treatment programs, offenders should be allocated to treatment based on risk and need assessment outcomes (Latessa et al., 2002), a practice implemented as part of the Prevention of Recidivism Program in The Netherlands. Studies have however shown that risk assessment is not always used to allocate offenders to treatment, even if such a risk and need-based approach is prescribed by official policies (Latessa, Cullen & Gendreau, 2002; Taxman & Bouffard, 2000). Lipsky's Street Level Bureaucracy Theory (1971; 1980) suggests that a successful implementation of public policy is not merely determined by the quality a policy measure, but instead is for a large part dependent on the actions of those who carry out government policy, so-called *street-level bureaucrats*. These are government employees, such as police officers and social workers, who interact directly with clients and citizens, and have substantial discretion in the execution of the tasks assigned to them. Although the work of public service employees (as is the case for prison staff members) can be considered highly scripted, they often need to improvise in order to be responsive in applying general rules and laws, in individual cases, while working under great time-pressure and with a limited amount of information available. Consequently, they adapt and interpret public policy in a way that enables them to efficiently cope with their tasks at hand (Lipsky, 1980; 2010). This then, according to Lipsky (1980), effectively becomes the public policy that they carry out. This often results in a gap between policy as written, and policy as performed (Lipsky, 1980; 2010). Prison staff-members who make decisions about the allocation of offenders to treatment programs can also be considered street-level bureaucrats. And based on Street Level Bureaucracy Theory, it is therefore expected that they are likely to use certain discretion when making treatment referral decisions, which may result in deviating from prescribed standards, which may even lead to the incorrect referral of offenders to specific types of programs

1.5 PRIOR STUDIES

As mentioned, this study aims to evaluate the Prevention of Recidivism Program. Although the program has been developed over a decade ago, there appears to be a considerable lack in knowledge concerning the implementation and effectiveness of the program. A literature review has indicated that since its implementation eleven studies were conducted. Of those studies, only two studies have focused on the Prevention of Recidivism Program as a whole (Van Bostelen et al., 2005; Inspectorate of Security and Justice, 2010). These studies did not focus on program effectiveness, but have merely assessed if the program adheres to certain aspects of the program's cooperation-model, in which tasks and responsibilities between the prison- and probation service are assigned. The most recent study (the first study was conducted prior to nation-wide program implementation, and therefore studied the program in its pilot-phase) was published in 2010 and was conducted by the Dutch Inspectorate of Security and Justice (ISJ). The report demonstrated that the implementation and execution of the Prevention of Recidivism Program fell short. It appears that organizational problems (such as a suboptimal cooperation between the prison service and probation service) and the complex program-structure caused great delays in individual program trajectories. Programs did not start in time, and re-integration plans were not established in time. Behavioral modules could not be implemented promptly and phased re-entry was therefore postponed in many cases (ISJ, 2010). In response to the ISJ-report, a number of measures were taken by the State Secretary for Security and Justice, in order to improve program functioning, which involved streamlining working processes to shorten the processing times, the prioritizing of offenders based on their remaining sentence, and a more efficient use of behavioral interventions (Parliamentary Papers, 2010/11).

The remaining nine studies have focused on the criminogenic need-specific behavioral programs (such as cognitive skill training, or lifestyle training), that were implemented in the scope of the Prevention of Recidivism Program (Barendregt & Wits, 2014; Buysse & Loef, 2013; Cornet, 2016; Ferwerda, Van Wijk, Arts & Kuppens, 2009; Fischer, Captein & Zwirs, 2012; Kuppens, Van Wijk & Klóne, 2012; Nas, Van Ooyen-Houben & Wieman, 2011; Schoenmakers, Van Leiden, Bremmers & Ferwerda, 2012; Van Poppel, Tackoen, & Moors, 2005). Seven of these nine studies conducted have been directed at program-integrity (is a program carried out according to plan). In summary, the studies conducted have shown similar results; treatment modules appeared to have been hampered by several (implementation) problems: Modules were applied infrequently, did not always reach their target population and were not always carried out as they should have been based on the treatment methods described (Barendregt & Wits, 2014; Buysse & Loef, 2013; Ferwerda et al., 2009; Kuppens, Van Wijk & Klóne, 2012; Nas, Van Ooyen-Houben & Wieman, 2011; Schoenmakers et al., 2012; Van Poppel, Tackoen, & Moors, 2005). Two studies also included treatment outcomes

(Buysse & Loef, 2013; Cornet, 2016), Buysse and Loef (2013) showed that offenders that had participated in cognitive skill training displayed a significant but small improvement with regards to three of the four areas targeted (rational problem solving, impulse control, and perspective taking), while Cornet (2016) revealed that offenders who took part in cognitive skill training, in comparison to a control group, showed little improvement in several behavioral measures. The last of these nine studies aimed to assess if treatment modules on offer in The Netherlands cover every criminogenic need present in the Dutch offender population. Fischer, Captein, and Zwirs (2012) concluded that this is not entirely the case: Although the main criminogenic needs (impulsivity, which is present in 90 percent of offenders, and a pro-criminal attitude, present in 83 percent of offenders) were covered by the programs on offer, three types of factors were not covered: needs concerning social relations (such as problematic family relationships, or anti-social friends), psychological needs (such as low confidence, stress or sexual deviancy), and structural needs (such as housing and financial situation).

Although aspects of implementation were studied, it has not been explored if the Prevention of Recidivism Program as a whole has been carried out adequately and has been effective in reducing the post-release re-offending rates among program participants. Based on previous work, it appears that the program, as well as the treatment modules applied within the scope of the program, was troubled by problems relating to program integrity. It is however unknown to what extent these issues have influenced program effectiveness. It must therefore be concluded that the program and its effectiveness are mostly unexplored. It is unclear if the program was successful in reaching its aim: reducing post-release re-offending rates among participants.

International studies

Compared to the considerable lack in knowledge on the effectiveness of the Dutch Prevention of Recidivism Program, a vast amount of empirical work has focused on the effectiveness of comparable programs implemented in other countries. Outcomes of these studies have consistently shown that treatment programs can be effective in reducing re-offending rates amongst participants. A systematic review of meta-analytic studies (Lipsey & Cullen, 2007) has shown positive (but small to moderate) prison-based treatment results, while supervision and sanctioning showed smaller or – in some instances – even negative (small to moderate) results. Though reductions in recidivism rates amongst a variety of programs were fairly diverse (Lipsey, 1999; Lipsey & Cullen, 2007; Lipsey, Chapman & Landenburger, 2001; Lösel, 1995), on average, programs that adhered to the RNR-principles appear to have had the most positive effect on re-offending rates (see e.g. Andrews & Bonta 2006; Andrews et al., 1990; Bonta & Andrews 2007; French & Gendreau, 2006; Gendreau et al., 2006; Lowenkamp, Latessa & Holsinger, 2006; Polaschek, 2012; Sherman et al., 1997). Additionally, studies indicated that program-integrity might be an important determinant, possibly explaining variance in treatment program effectiveness (Gendreau, 1996; Lipsey & Cullen, 2007; Palmer, 1995).

Shortcomings

Despite the fact that the effectiveness of prison-based treatment programs have been addressed and confirmed in an international context, it is not sufficient to simply generalize these findings to the Dutch context, and assume that accordingly, the Prevention of Recidivism Program will probably also be effective in reducing post-release re-offending. First and foremost, because all of these studies had focused on treatment programs in other geographical regions. We do not know if comparable results in a different geographic location, where penal laws, conditions (and length) of confinement and social circumstances are different. Secondly, while recognizing the clear value of the vast amount of studies conducted, there are some limitations that should be mentioned, justifying the need for further research. First of all, most studies merely focused on treatment outcomes, and failed to control for effects of program engagement and program allocation. Second, few studies were theory driven, resulting in lists of factors that influenced treatment outcomes, without a comprehensive explanation of the mechanisms through which treatment outcomes were attained. Third, information on risk and need factors was often limited, and/or was measured by inadequate instruments. And fourth, many studies focused on community-based rehabilitation programs, and did not focus on prison-based programs.

To sum up, as a result of a lack of available studies conducted in The Netherlands, and studies conducted abroad for which it is unknown if and how they translate to the Dutch situation, much is unknown regarding the Prevention of Recidivism Program. It is unknown how many offenders are eligible for participation in the program, and what their characteristics are. It remains unclear how many eligible offenders participate in the program, and who do not, and what their characteristics are. There is no information available about the treatment modules that are applied within the scope of the program; we do not know which offenders are referred to treatment, and it has not been unidentified if offenders were referred to treatment based on the appropriate considerations. Additionally, we do not know how many offenders complete the Prevention of Recidivism Program, and what their characteristics are. And last, it remains unclear of the program was effective in reducing the post release re-offending rates among program participants. This dissertation aims to address these matters, by conducting a broad evaluation study into the functioning and effectiveness of the Prevention of Recidivism Program.

1.6 THE CURRENT STUDY

Research Questions

A prison sentence in The Netherlands is aimed, as much as possible, to the re-integration of offenders in society. By including this statement in its penal laws, the Dutch legislator has proclaimed a central role for rehabilitation in its penal policy. This gave way to the introduction of the Prevention of Recidivism Program, a prison-based rehabilitation program that aims to decrease post-release

re-offending among program participants. The Prevention of Recidivism Program has been implemented nation-wide almost a decade ago. And although the program has been replaced by a new policy measure in 2014, rehabilitation practices carried out nowadays still rely on the same risk/need based approach of risk assessment and the implementation of criminogenic need specific treatment modules. To date, much is however unknown about the performance and consequences of the Prevention of Recidivism Program. As a result, since 2007 up to present date a rehabilitation program has been running for which we do not know (a) the functioning, and (b) the effectiveness.

This evaluation study therefore focused on the functioning and effectiveness of the Prevention of Recidivism Program. The main three research questions were: (1) *To what extent is the Prevention of Recidivism Program effective, based on theoretical and empirical knowledge?* (2) *To what extent is the Prevention of Recidivism program functioning according to plan?* And (3) *To what extent is the Prevention of Recidivism Program effective in reducing post-release re-offending rates among program participants?* By answering the main research question proposed, this study aimed to realize three goals:

First, this study aimed to describe and evaluate the theories on which the Prevention of Recidivism Program was based. This was done by conducting a plan evaluation, which aimed to assess which results could be expected based on the program as described in relevant documentation. The research question central to this plan evaluation was: *To what extent can the Prevention of Recidivism Program, based on theoretical and empirical knowledge, be considered an effective rehabilitation program?*

Second, this study aimed to describe and evaluate the functioning of the Prevention of Recidivism Program: i.e. assess if the program was applied as it was designed, which was done by use of a process-evaluation. This process evaluation was conducted by meticulously studying each phase (as shown in paragraph 1.2, Figure 1) of the Prevention of Recidivism Program-process (i.e. qualification, participation, allocation, and completion), leading to four sets of research questions: (a) *How many offenders qualified for program entry, and what were their characteristics?* (b) *Did the correct target population qualify for the Prevention of Recidivism Program? How many offenders participated in the Prevention of Recidivism Program, and what were their characteristics? Which factors determined program participation?* (c) *How many offenders were allocated to what types of treatment? Was the correct target population allocated to the right type of treatment? Which factors influence these treatment-allocation decision-making processes? And* (d) *How many offenders completed the program, and what were their characteristics? Which factors determined program completion?*

Third, this study aimed to describe and evaluate the effectiveness of the Prevention of Recidivism Program, by conducting a product evaluation in which the final research question was addressed: *Was the Prevention of Recidivism Program effective in reducing 6, and 24-month post-release re-offending rates among program participants?* See Table 1 for an overview of each research questions proposed in the current study.

Table 1. Study outline

Chapter	Evaluation type	Subject	Main research question(s)	Data
1		Introduction	–	–
2	Plan evaluation	Program theory	To what extent can the Prevention of Recidivism Program, based on theoretical and empirical knowledge, be considered an effective rehabilitation program?	Literature review
3	Process evaluation	Qualification	How many offenders qualified for participation in the Prevention of Recidivism Program? What were their characteristics? Did the correct target population qualify for the Prevention of Recidivism Program?	Prevention of Recidivism Program registration data Prison Registration data Risk Assessment data
4	Process evaluation	Participation	How many offenders participated in the Prevention of Recidivism Program? What were their characteristics? Which factors determined program participation?	Prevention of Recidivism Program registration data Prison Registration data Risk Assessment data
5	Process evaluation	Allocation	How many offenders were allocated to what types of treatment? Was the correct target population allocated to the right type of treatment? Which factors influenced these treatment-allocation decision-making processes?	Prevention of Recidivism Program registration data Prison Registration data Risk Assessment data Prison organization characteristics (collected in light of study)
6	Process evaluation	Completion	How many offenders completed the Prevention of Recidivism Program? What were their characteristics? Which factors determined program completion?	Prevention of Recidivism Program registration data Prison Registration data Risk Assessment data
7	Product evaluation	Recidivism	To what extent was the Prevention of Recidivism Program effective in reducing 6, and 24-month post-release re-offending rates among program participants?	Prevention of Recidivism Program registration data Prison Registration data Risk Assessment data Sentencing files from Dutch Prosecution Office General Documentation Files (Criminal Record Office)
8		Summery and discussion	–	–

Research sample and data

In order to address the first research question, relating to plan-evaluation, a literature study was conducted, in which the program manual, policy papers, parliamentary papers, and published literature concerning the Prevention of Recidivism Program were gathered and analyzed.

Our process evaluation and product evaluation were conducted by analyzing a unique research sample that was collected as part of a larger research project: the Prison Project. The Prison Project is a large-scale, longitudinal research project studying the effects of imprisonment on the life of detainees and their families in The Netherlands. The study used a national population-sample in which the total inflow (in every single remand center in The Netherlands) of male detainees that were put in pre-trial detention between October 2010 and March 2011 was included. Additional selection criteria included age (between the age of 18 and 65) and place of birth (born in The Netherlands; Dirkzwager & Nieuwbeerta, 2016). The Prison Project studied a total sample of 3.981 offenders by collecting two types of data: official registration data (that was available on the total sample of 3.981 detainees) and panel data (available on a sample of 1.904 detainees that decided to participate in the panel study). Due to the selective group of offenders that were eligible for participation in the Prevention of Recidivism Program, and the broad nature and large number of official registration data sources available, the current study used registration data and was therefore able to study the full population of 3.981 detainees.

As mentioned, data from a number of official registration sources on the detainees included in the sample were collected to answer the research questions proposed in this dissertation. First, data on all persons in the sample from several prison registration databases were made available by the *Dutch Custodial Institutions Agency*. This included the Prison Registration System (in which information on background characteristics, offence characteristics, and incarceration details, such as in and outflow, transfers between prisons, departments, and cells is administered), and the Prevention of Recidivism Registration system (which contains in-depth information on rehabilitation trajectories). Second, risk assessment data on all detainees in the sample were made available by the *Dutch Probation Service*. Third, records from the General Documentation Files (GDF) of the Criminal Record Office were provided by the *Research and Documentation Centre* of the Dutch Ministry of Security and Justice. These data contained detailed information on all registered crimes and convictions, and provided information about a respondent's criminal history, current offences and registered post-release re-offending behavior. Fourth, a data file was provided by the *Dutch Prosecution Office* which contained detailed trial information, including information about the offender, the offence and final punishment on all of the current study's respondent's criminal cases. And fifth and final, a telephone-administered interview was held to gather organizational information on every remand center and prison in which respondents of the current study were at some point detained. All Dutch penitentiaries were asked to provide information

concerning their occupation rates (per prison and per location), staff numbers, and the availability of in-house rehabilitation programs. An overview of each data sources used in our consecutive chapters is provided in Table 1.

1.7 RELEVANCE

An improved understanding of What Works in correctional rehabilitation programming has been a crucial step in working towards implementing evidence based practices in correctional settings. However, to help further the field of correctional rehabilitation research and practice, it is vital that we continue to empirically evaluate rehabilitation programs in various populations in other geographic regions, and that we advance our understanding of the mechanisms through which effective interventions work (Lipsey & Cullen, 2007). The current study aims to do so, thereby making a major contribution to the current state of the art in prison-based rehabilitative treatment research.

Scientific relevance

The study described in this dissertation makes substantial scientific progress in a number of areas. First, it proposes new research questions by assessing the functioning and effectiveness of a program that has not been previously studied. Additionally, the current study's research questions are not limited, alike much of the previous work conducted, to the effectiveness of prison-based treatment programs. By using a comprehensive evaluation approach, important prerequisites of program effectiveness, such addressing the correct target population, are also studied. Also, by focusing on such a broad overarching rehabilitation program that is carried out nationwide, the entire field of prison-based rehabilitation efforts undertaken in Dutch prisons is studied. This has never been done, and provides a unique opportunity to compare different elements of treatment and different types of treatment, imposed on different groups of offenders. Second, the current study was able to test the empirical validity of several criminological theories, such as (a) the risk-need-responsivity model, (b) the good-lives model, (c) the multifactor offender readiness model, and (d) street level bureaucracy theory. And finally, methodological progress is made by using a unique, large-scaled dataset, consisting of a population-based sample of offenders who entered prison in pre-trial detention. On this large dataset of offenders, multiple sources of official registration data were available, such as risk assessment data, making it possible to analyze and control for a large number of characteristics. Also, advanced methodological techniques were applied to address the research questions proposed.

Societal importance

By conducting a comprehensive evaluation study into the functioning and effectiveness of a prison-based rehabilitation program in The Netherlands,

this study is also of great societal relevance, and of vital importance for both policy makers and practitioners.

Almost every offender that is incarcerated returns home after a short or long period in detention. Studies have indicated that the recidivism rate among ex-detainees is high; about half of them have re-offended in the two years following release (Linckens & De Looff, 2013). The Prevention of Recidivism Program has been implemented to prevent re-offending. However, rather surprisingly, the effectiveness of the Prevention of Recidivism Program, which has been implemented and running for over a decade, has to date not been studied. This is problematic for several reasons: First, as mentioned, the program was aimed to contribute to decreasing re-offending rates and contribute to a safer society. If the program is however unable to reach the desired results, or worse has a negative impact on offenders, this will not improve, or even have a harmful impact on public safety. Second, because tax money was invested to implement and carry out the program, it is of great societal relevance to assess if this was “money well spent”, especially in a time of economic recession, where considerable cuts in government spending were implemented in areas such as health care and education. And third, although the Prevention of Recidivism Program is a voluntary program, non-participation has a number of consequences relating to conditions of confinement and even the duration of an offenders prison sentence: Imposing a program in such a way carries responsibility for outcomes: If detainees are (on a large scale) exposed to a program that may negatively influence their future prospects, this is unwanted and should be abolished. On the contrary, if a study into the effectiveness of the program can demonstrate that the program has a positive impact on the post-release re-offending rates of former participants, this supports current practices and could be a reason to continue and perhaps even expand the program. In light of the above mentioned, a study into the consequences of participation is considered crucial.

1.8 STUDY OVERVIEW

In summary, this study aims to assess the functioning and effectiveness of the Dutch prison-based Prevention of Recidivism rehabilitation program. The three central research questions addressed are: (1) *To what extent is the Prevention of Recidivism Program effective, based on theoretical and empirical knowledge?* (2) *To what extent is the Prevention of Recidivism program functioning according to plan?* And (3) *To what extent is the Prevention of Recidivism Program effective in reducing post-release re-offending rates among program participants?* In order to answer the overall research questions proposed, a plan-, process-, and product evaluation were conducted, the results of which are presented in the several chapters included in this dissertation (an overview on which is displayed in Table 1).

Chapter 2 discusses the results of a plan-evaluation, in which it was assessed if the Prevention of Recidivism Program was expected to be effec-

tive, based on theoretical and empirical knowledge. In order to assess the program potential, a reconstruction of program logic was conducted; a coherent assembly of all assumptions and mechanisms, underlying a program, that combined explain how a program and its methods intend to reach its goals. The program logic was then evaluated for plausibility, in light of theoretical knowledge and empirical evidence.

The consecutive chapters focus on the functioning of the Prevention of Recidivism Program (process evaluation). These chapters use empirical data to study each element (qualification, participation, allocation and completion) of the Prevention of Recidivism Program process (an overview of which was presented in Figure 1). Chapter 3 focuses on program qualification, the aim of which was to assess how many offenders qualified for participation in the Prevention of Recidivism Program, and to determine what their characteristics were. In this chapter it is also explored if the correct target population had qualified for program qualification.

Chapter 4 continues with the group of offenders identified as a program candidate, and focuses on program participation. The study discussed in this chapter investigated how many offenders participated in the Prevention of Recidivism Program, and studied what their characteristics were. It also examined which factors determined program participation.

The most important pillar of the Prevention of Recidivism Program is the application of criminogenic need-specific treatment modules in line with an offender's risk for re-offending and criminogenic needs. Chapter 5 therefore concentrates on the selection processes that have influenced criminogenic need-specific treatment allocation. It aimed to assess how many offenders that participated in the Prevention of Recidivism Program were allocated to what types of treatment, and discusses if the correct target population was allocated to the correct type of treatment. Furthermore, it aimed to determine which factors influenced treatment-allocation decision-making processes.

Chapter 6 presents a study that focused on program completion. In this closing part of our process evaluation it was examined how many participants completed the Prevention of Recidivism Program, and was determined what their characteristics were. Furthermore, it was studied which factors determined program completion.

In Chapter 7, a product evaluation is presented in which the impact of the Dutch Prevention of Recidivism Program on the 6 and 24-month post-release re-offending rates of participating detainees were examined. This was done using two approaches. First, it was assessed if the post-release recidivism rates of each treatment group described in preceding chapters (i.e. program non-candidates, program non-participants, program non-completers, completers standard program, completers standard program plus treatment) differed, using multivariate regression analysis. Second, it was studied using propensity score methodology, by which the re-offending rates of program completers were compared to those of a comparable group of offenders who were eligible for participation, but could not engage in treatment due to organizational circumstances.

Chapter 8 presents the general discussion. In this chapter, the current studies main findings are summarized and discussed in light of the theoretical framework brought forward. Furthermore, the study's strengths and limitations were discussed, after which some recommendations were made regarding future research. The conclusions drawn in this study also led to some policy implications, which are also elaborated on in the final chapter.

