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

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5 Allocation of offenders to treatment modules■

5.1 Introduction

Each year, a large number of ex-detainees are released into society. Studies have indicated that prisoners returning to communities do so under far from optimal life circumstances. Research suggests that many ex-detainees experience physical and psychiatric problems, are struggling with drug and/or alcohol addictions, and face various social problems, such as unemployment; homelessness; and financial difficulties (Binswanger et al., 2007; Binswanger, Krueger & Steiner, 2009; Dirkzwager, Nieuwbeerta & Fisselier, 2004; Geller & Curtis, 2011; Hagan & Dinovitzer, 1999; Hammett, 2001; Lynch & Sabol, 2001; Petersilia, 2000; Travis, Solomon & Waul, 2001; Western, Kling & Weiman, 2001). Furthermore, former inmates often return to disadvantaged communities (Bushway, 2006; Clear, Rose & Ryder, 2001; Rose & Clear, 2003; Travis, Solomon & Waul, 2001) and face difficulties as a result of their poor conditions and the social stigma of being an ex-inmate (Becker, 1963; Braman, 2002; Holzer, 1996; Holzer, Raphael & Stoll, 2006; Kuzma, 1998; Pettit & Western, 2004; Uggen, Manza & Thompson, 2006).

Given the aforementioned it is not surprising that recidivism rates among ex-detainees are high. Studies have shown re-arrest rates of about sixty percent within three years after release and re-incarceration rates as high as fifty percent within that same period of time (Hughes & Wilson, 2002; Langan & Levin, 2002; SEU, 2002). In The Netherlands, research has shown that within six years, over seventy percent of released prisoners were reconvicted and almost fifty percent were again incarcerated (Wartna et al., 2010). Within this context, nowadays, an increasing amount of attention is being paid to what the prison system can do to prepare detainees for re-entry into society and to reduce re-offending after release. To achieve this, many Western countries have developed and implemented prison-based rehabilitation programs that aim to lower chances of future criminal behavior (Bonta & Andrews, 2007; Hannah-Moffat, 2005; Jolley & Kerbs, 2010; McSweeney, Turnbull & Hough, 2008).

■ A shortened version of this chapter was accepted for publication in Dutch as: Bosma, A. Q., Kunst, M. J. J., Dirkzwager, A. J. E. & Nieuwbeerta, P. (2016). Bosma, A. Q., Kunst, M. J. J., Dirkzwager, A. J. E. & Nieuwbeerta, P. (2016). Street-level bureaucracy en verwijzingen naar gedragsinterventies in Nederlandse penitentiaire inrichtingen: Discrepanties tussen beleid en praktijk. *Tijdschrift voor Criminologie*, *58*(4), 22-47.
An extensive version was submitted for publication as: Bosma, A. Q., Kunst, M. J. J., Dirkzwager, A. J. E. & Nieuwbeerta, P. (2016). Prison-based treatment allocation: A street-level bureaucracy perspective.

Correctional rehabilitation programs are generally based on the central principles of effective treatment, represented in the *Risk-Need-Responsivity* model of crime prevention and correctional rehabilitation, the *RNR-model* (Andrews et al, 1990; Bonta & Andrews, 2007). This model argues that treatment can be effective in reducing re-offending rates if it is matched to the characteristics of individual offenders. The model specifies *who* should be treated (high risk offenders), *what* should be treated (criminogenic needs; factors that were shown related to future re-offending), and gives direction to *how* offenders should be treated (in line with, for example their motivation, intelligence and learning style) (Andrews, 1995; Andrews & Bonta, 2010; Andrews, Bonta & Hoge, 1990; Andrews & Dowden, 1999; Lowenkamp & Latessa, 2005). Research has shown that treatment can be effective if it adheres to these principles, and that effectiveness increased if more principles are met (see e.g. Andrews et al., 1990; Cullen & Gendreau, 2001; Gendreau, 1996; Gendreau, Little & Goggin, 1996; Lipsey & Cullen, 2007; Lowenkamp, Latessa & Holsinger, 2006; Lowenkamp, Latessa & Smith, 2006).

As suggested by the RNR-model, correctional treatment can only effectively reduce future re-offending, if offenders are allocated to a program that is in line with their risk for recidivism and criminogenic needs. Latessa and others (2002) have compared the issue if allocating offenders to treatment resources to a hospital or doctor's office: The first step towards delivering effective treatment is diagnosing a patient's condition and its severity. If a diagnosis is absent, treatment will have no clear foundation and medicine would be a "lottery" in which a patient can only hope that he or she was referred to the proper type of treatment (Latessa, Cullen & Gendreau, 2002). Correctional treatment allocation works in a similar way. Effective treatment programs rely on a proper assessment of risk for future criminal behavior and criminogenic needs (Latessa, Cullen & Gendreau, 2002).

In order to effectively assess an offender's risk and needs, risk assessment tools were developed. Contemporary risk assessment tools (Andrews, Bonta, & Wormith, 2004; 2006; Bonta & Andrews, 2007) use a combination of static risk factors (such as criminal history) and dynamic factors (such as substance abuse problems). By applying these instruments, offenders can be classified regarding risk level, it can also be determined which type of criminogenic needs need to be targeted by correctional treatment. Previous work has however illustrated three issues regarding risk assessment (see Gendreau & Goggin, 1997; Latessa, Cullen & Gendreau, 2002; Taxman & Bouffard, 2000). First, it appears that risk assessment is not always applied (Latessa, Cullen & Gendreau, 2002; Taxman, Perdoni & Harrison, 2007). For example, a national study conducted in the U.S. has found that only 34.2 percent of correctional agencies use a standardized risk assessment instrument to place offenders in substance abuse treatment (Taxman, Perdoni & Harrison, 2007). Second, risk assessment is often conducted using unstandardized, non-validated, poorly designed and/or outdated instruments (see e.g. Matthews, Hubbard, and Latessa, 2001; Latessa, Cullen & Gendreau,

2002; Taxman & Marlowe, 2006). And third, if standardized and validated risk assessment instrument (such as a fourth generation tool, see Andrews, Bonta & Wormith, 2004; 2006) are used, outcomes are frequently ignored (Latessa, Cullen & Gendreau, 2002; Taxman & Bouffard, 2000). Consequently, some scholars have proclaimed a one-size-fits-all approach to referring all offenders to an often-limited number of programs and services (Taxman & Marlowe, 2006).

This supposed one-size-fits-all approach, which goes against existing policies based on knowledge on effectiveness as demonstrated by previous research, is not unique for correctional rehabilitation programming. In fact, policies are not being performed in practice, as they were designed, caused by the actions of public service employees in many (governmental) organizations (Lipsky, 1980); a phenomenon often referred to as *Street-level Bureaucracy* (Lipsky, 1980). The current study aims to address if this is also the case in a prison-based rehabilitation program applied nation-wide in The Netherlands.

Prison-based rehabilitation in The Netherlands

In The Netherlands, rehabilitation efforts were embedded within the *Prevention of Recidivism Program*: a prison-based rehabilitation program designed for detainees with a prison sentence of at least four months, implemented nation-wide in 2007. In line with the *Risk-Need-Responsivity* model, the Prevention of Recidivism Program aims to reduce re-offending rates among participants by focusing on two focal points: (1) assessing risk for recidivism and criminogenic needs by use of a standardized, validated risk assessment instrument, and (2) applying criminogenic need-specific treatment programs in line with risk assessment outcomes (Van der Linden, 2004). The program is voluntary. However, detainees who decide to participate can be placed in prison facilities with a lower security level where they are granted more freedom and are also eligible to spend up to one third of their sentence at home, under supervision of the Dutch Probation Organization (Dutch Prison Service & Dutch Probation Organizations, 2007).

To attain the first objective, proper assessment of risk for reoffending and criminogenic needs, the Dutch-language Recidivism Assessment Scales (RISc) was developed, an instrument based on and highly comparable to the British Offender Assessment System (OASys; Howard, Clark & Garnham, 2003). The *RISc* is based on the RNR principles and was designed to (a) assess an offender's likelihood of recidivism (defined as a new conviction), (b) identify and classify offending-related needs on twelve criminogenic risk domains, namely: (1) offending history and (2) current offense and pattern of offences; (3) accommodation; (4) education, work, and training; (5) financial management and income; (6) relationships with partner, family, and relatives; (7) relationships with friends and acquaintances; (8) drug misuse; (9) alcohol misuse; (10) emotional wellbeing; (11) thinking and behavior; and (12) attitudes and orientation, (c) assess an offender's responsivity to treatment, and (d) indicate the need for further risk evaluation (Adviesbureau

Van Montfoort & Reclassering Nederland, 2004; Bosker, 2009; Van der Knaap, Leenarts, Born & Oosterveld, 2012). Studies have demonstrated the intraclass-reliability, internal consistency and predictive validity of the RISc to be satisfactory (Van der Knaap, Leenarts & Nijssen, 2007; Van der Knaap & Alberda, 2009).

In light of the second objective, criminogenic need-specific treatment modules were developed, and were assessed for potential effectiveness by an accreditation committee that was set up by the Dutch Ministry of Justice and Safety. This committee assessed the potential effectiveness of behavioral interventions based on criteria derived from the *what works* literature (such as a adherence to risk and need factors, and treatment integrity). All interventions imposed within the Prevention of Recidivism Program have to be accredited by this committee. Accordingly, the two main treatment programs that are carried out within the scope of the Prevention of Recidivism Program are *Cognitive Skills training*, to improve the cognitive skills necessary to function in society and *Lifestyle training*, to help offenders cope with addiction to drugs or alcohol. Other available trainings are Job Skill training, to help offenders with limited work experience and/or problems with getting or maintaining a job and a Dutch version of the Aggression Replacement Training, to help offenders cope with violence and anger problems. However, research has shown that these types of training aren't applied regularly, combined only taking up about seven percent of the total number of executed treatment programs in The Netherlands (Bosma, Kunst & Nieuwbeerta, 2013).

Official guidelines, incorporated in several program manuals, state that risk assessment outcomes determine qualification for cognitive skill- and lifestyle training. For example, a moderate to high overall risk to re-offend (evidenced by a risk assessment score of at least 32), and cognitive deficits (evidenced by a weighted score on the risk assessment scale thinking and behavior of at least 4), qualifies an offender for cognitive skills training (Ministry of Justice, 2007), while drug-, alcohol- and or gambling-abuse problems (evidenced by a score on the risk assessment scales drug misuse of at least 3, and/or alcohol misuse of at least 2, and or financial management and income of at least 5, with a minimal score of 2 on item 5.4), qualifies an offender for lifestyle training (SVG Verslavingsreclassering, 2009). If an offender has no criminogenic needs (i.e. factors assumed to cause re-offending behavior), offenders can enter the Prevention of Recidivism Program and are eligible for phased re-entry and early release without having to complete specific treatment modules.

The problem with applying such guidelines however is that in practice; they are not always carried out as they were prescribed. This was exemplified by previous studies, indicating that risk assessment instruments aren't always used to allocate offenders to treatment (Latessa, Cullen & Gendreau, 2002; Taxman, Perdoni & Harrison, 2007; Taxman & Bouffard, 2000). If this is also the case in The Netherlands, was assessed by the current study.

5.2 Theoretical considerations

Several factors can contribute to policies not being performed in practice, as they were prescribed. In his highly influential reading; "*Street-level Bureaucracy: Dilemmas of Individuals in Public Services*", Lipsky (1980) sets forth a bottom-up approach to understanding public policy implementation, by arguing that a successful implementation of public policy is not solely determined by the quality of policy measures, but instead is for a large part dependent on the actions of those who carry out government policy, so-called *frontline workers*, or *street-level bureaucrats*. To understand how street-level bureaucrats have such a large influence on policy-implementation, there are five characteristics that need mentioning (see Maynard-Moody & Portillo, 2010). First, street-level bureaucrats public service employees who are de facto *frontline workers*; meaning that their organizational place is often at the bottom of the organizational hierarchy (Lipsky, 1980). Traditional examples of frontline workers are teachers, police officers and social workers, other officials such as court clerks (Yngvesson, 1988) and corrections officers (Guy, Newman & Mastracci, 2008) can however also be considered street level bureaucrats. Secondly, street-level bureaucrats often interact directly (face-to-face) with clients and citizens (Lipsky, 1980). In many cases, these individuals are non-voluntary clients (such as a citizen stopped by a police-officer for speeding), who did not choose the service of the specific governmental agency, and also cannot seek alternative services elsewhere (Maynard-Moody & Portillo, 2010). A third key-component of frontline workers relates to the fact that, although their work can be considered highly scripted, public service employees are allowed to vary in the extent to which they impose the rules and laws assigned to them. This *discretion* (see Davis, 1971), according to Lipsky (1980), is a result of the complex decisions that street-level bureaucrats have to make, in which they have to interpret and apply general policies in specific situations (Lipsky, 1980; 2010). Fourth, related to their extensive discretion, they also have considerable autonomy in making decisions, and often their activities are unsupervised. For example, a teacher is almost always alone in a classroom, with little to no direct management-supervision. A fifth and final key-characteristic of frontline-workers is that on paper, they are never considered part of the policy process, when in fact; they are perhaps the *ultimate policymakers* (Weatherly, 1979; 1980); they are the final policymaker, and perhaps have the greatest influence (Maynard-Moody & Portillo, 2010).

The work of street-level bureaucrats can be difficult and demanding; they often have to deal with working under great time pressure, with limited resources, and have to cope with expectations from both clients and their employer. To be able to do their job as efficiently as possible, it is argued that public service employees typically can resort to three modes of dealing with work pressure; coping, networking and activism (Hupe & van der Krogt, 2013). The first and most common response to dealing with the often inevitable gap between demands and recourses is the development of coping

strategies. In coping, a frontline worker basically accepts work pressure as a given and tries to make the best of it (Lipsky, 1980), usually by trying to decrease demands for services. Scholars have distinguished various coping strategies, such as making standardized or routine decisions for groups of clients (routinizing; which is often based on stereotypes); redefining tasks and priorities, in which priority is given to decisions that involve easier and manageable clients and cases (creaming); a frontline worker may also try to make services less attractive for clients (rationing), for example by creating longer waiting times (Ellis, 2011; Fineman, 1998; Lehmann-Nielsen, 2006; Lipsky, 1980; 2010; Moore, 1987; Tummers, Bekkers, Vink, & Musheno, 2015). Besides coping, street-level bureaucrats may also turn to a more professional response; networking, which involves dealing with work pressure by seeking feedback among co-workers and creating shared goals with colleagues, or may resort to activism, which means a frontline worker neither accepts nor tries to cope with work pressure, but instead choses to fight to try to better their work circumstances (Hupe & van der Krogt, 2013). Networking and activism in most cases do not (or hardly) affect clients and citizens, while coping frequently results in deviating from prescribed standards, biases the implementation of public policy and often negatively influences policy goals (Winter, 2002). It can, for example, result in a selective group of clients or citizens not receiving services.

In summary, street-level bureaucrats try to deal with an often enormous workload and experienced gap between work-demands and available resources, by using the discretion they are allowed to exercise and apply a broad range of coping mechanisms (Winter, 2002). As a consequence, trough the actions of street-level bureaucrats, discrepancies can occur between prescribed policy guidelines, and the actual implementation of these guidelines in practice, Lipsky (1980) refers to this phenomenon as "a gap between policy as written, and policy as performed". As put in Lipsky's words; "…*the decisions of street-level bureaucrats, the routines they establish, and the devices they invent to cope with uncertainties and work pressure, effectively become the public policies they carry out*." (Lipsky, 1980, p. xii).

Although perhaps never before considered as such, prison staff-members who make decisions about the allocation of offenders to treatment programs can be deemed to function as street-level bureaucrats. That is to say; prison employees who make these decisions are (a) operational staff-members (as opposed to middle or higher management); (b) are in direct (and face-to-face) contact with prisoners (a non-voluntary client); over whom they make decisions in which the (c) can exercise a considerable amount of discretion; and (d) have relative autonomy; consequently, they can be considered (e) the ultimate (as in final) policy makers in Dutch prison-based treatment implementation.

As prison staff members who decide upon the referral of offenders to treatment are considered street-level bureaucrats, they are expected to act accordingly. First, it is therefore expected that prison staff-members apply considerable discretion when making treatment referral decisions, result-

ing in treatment referrals not (fully) in line with risk- and need assessment outcomes. This may result in limited access to care for a (perhaps selective) group of offenders. Second, based on Street-Level Bureacracy Theory, it is hypothesized that prison staff-members, caused by (a) a gap between resources and demands and (b) as a result of a number of coping mechanisms, do not always allocate offenders to appropriate treatment programs (i.e. treatment based on their risk and need-assessment scores). Instead, as theory predicts, prison-staff members are expected to resort to standardized referrals of offenders to programs, with priority given to either the most manageable offenders whom are expected to remain and actively engage in treatment, or to those who are considered to be most in need of treatment, and for whom the best outcomes are expected. Since at the moment of making treatment referral decisions prison staff-members do not have access to in depth information regarding, for example, an offender's criminal history, or court-documentation on every aspect of their current offence (Inspectorate of Security and Justice, 2010), they typically have to rely on risk assessment outcomes to assess an offenders condition. To make attributions on who should (or should not) be referred to treatment, prison staff-members are expected to rely on the broad range of *risk assessment outcomes*, as assessed by the Recidivism Assessment Scales (scores regarding the domains: offending history, current offence and pattern of offences, accommodation, education; work; and training, financial management and income, relationships with partner and relatives, relationships with friends and other acquaintances, drug misuse, alcohol misuse, emotional well-being, thinking and behavior, and attitudes/orientation), with a more serious (or severe) risk and need assessment outcomes leading to either less or more treatment referrals. Additionally, in line with Street-Level Bureaucracy Theory (Lipsky, 1980), nonconformity with prescribed policies is expected to increase if there is a larger gap between the earlier mentioned resources and demands. Therefore, it is expected that certain *organizational circumstances* influence treatment referral decision-making processes. First, concerning the expected sentence length it is hypothesized that a longer prison sentence will make it easier to get an offender enrolled in treatment. Since research has shown that turnaround times for treatment programs can be extensive (Inspectorate of Security and Justice, 2010), it may be expected that a long expected sentence lead to an increase in treatment referrals. Second, it may be hypothesized that overcrowding and staff shortages will serve as an organizational constraint, limiting time and recourses to be spend on an individual detainee, thereby negatively influencing treatment referrals. It may therefore be expected that prison crowding – the number of detainees imprisoned versus the maximum prison occupation – as well as staff detainee ratios – the number of detainees versus the number of rehabilitation staff members – will influence treatment referrals. Finally, not every treatment program is on offer in every prison, so sometimes, referring an offender to a treatment program means the offender has to be relocated to another prison. It could be the case that

this will be viewed as a disadvantage, decreasing the number of treatment referrals. Consequently, it may be hypothesized that treatment availability will positively influence treatment referrals.

In summary, based on Street-Level Bureaucracy Theory (Lipsky, 1980) it is hypothesized that: (a) prison staff-members deviate from prescribed policies in referring offenders to treatment programs. In doing so, it is expected that: (b) they are influences by and offenders risk- and need assessment outcomes and a set of relevant organizational circumstances.

5.3 Previous studies

Street-Level Bureaucracy Theory was subjected to an immense body of empirical studies, which have found substantial empirical evidence for its applicability (for a summary of the work conducted, see e.g. Brodkin, 2012; Maynard-Moody & Portillio, 2010; Tummers et al, 2015), among different populations, including (but not limited to) teachers (Weatherley & Lipsky, 1977; Weatherley, 1979), social workers (Ellis, 2007), nurses (Mountain & While, 2005), police officers (Brown, 1981; Mastrofski et al, 1995; Maynard-Moody & Musheno, 2003) and judges (Cowan & Hitchings, 2007). These studies often find that formal policy is in most cases not identical to the policy as produced, or as stated by Brodkin (2012, p. 943): "*what you see may not be what you get*". Previous work has also specifically focused on some of the key-concepts central in Lipsky's (1980) work, i.e. discretion and coping.

Discretion (see e.g. Brodkin, 1997; Buffat, 2011; Gulland, 2011; Lindhorst & Padgett, 2005; Meyers et al., 1998; Smith & Donovan, 2003; Tummers & Bekkers, 2014; Tummers, Bekkers & Steijn, 2009) can be considered functional and often even necessary to be responsive to individual clients and their circumstances in various situations (Hupe & Hill, 2016), can make policies much more meaningful to clients, and can make a street-level bureaucrat more willing to implement a policy (Tummers & Bekkers, 2014), can however also lead to unwanted consequences (see e.g. Lindhorst & Padgett, 2005; Gulland, 2011; Maynard-Moody & Musheno, 2000; Smith & Donovan, 2003) such as a minimized access to services (Lindhorst & Padgett, 2005).

Coping, referring to the various ways street-level bureaucrats were theoretically believed to deal with the inevitable gap between work demands and resources available, was also issued in previous empirical work (see Brodkin, 1995; 1997; 2011; Meyers, Glaser & Mac Donald, 1998; Meyers & Vorsanger, 2002; Tummers et al., 2015). A systematic review into the coping behavior of frontline workers (Tummers et al., 2015) identified three types of coping strategies: moving towards clients, moving away from clients, and moving against clients. Moving towards clients, which means frontline workers adjust to meet the needs of clients (for example by bending/breaking the rules) was found the most frequent coping strategy. Moving away from clients, the previously mentioned routinizing (routine decision-making) and rationing (making services less accessible or attractive), however

also occurred rather frequently (See e.g. Meyers et al., 1998; Winters, 2002). The final coping strategy, moving against clients (such as rigid rule-following), was found infrequently applied (Tummers et al., 2015).

Traditional (empirical) studies into Street-Level Bureacracy Theory can roughly be divided in policy-focused studies, that focused on how public policies are shaped by street-level practices in various areas (i.e. welfare, education, health care, work, corrections etc.), and management and government studies, which have studied the influence of street-level bureaucracy on changes in governance, management and organizational practices. More recent however, and relevant to our current study, emerging fields of study extended the boundaries of the street-level philosophy (Brodkin, 2012), and focused on the influence of street-level practices on *access of services* for clients and civilians. Generally, these studies revealed that street-level bureacracy, causing nonconformity to prescribed policies, can lead to disparities in access to services and limited access to care for some (often disadvantaged) populations (see Brodkin & Majmundar, 2010; Monnat, 2010; Moynihan & Herd, 2010; Riccucci, 2005; Wenger & Wilkins, 2009). This may support our first hypothesis, stating that the population central to this study (incarcerated offenders), may also experience inadequate access to care as a result of prison employees not following the policy rules laid out.

The current studies second hypothesis makes assumptions about the factors that, as offenders are expected not be allocated to programs based on the official guidelines, instead influence the decisions made by prison-staff members; risk assessment outcomes (prioritizing those in more need for treatment, or those offenders who represent more manageable cases) and organizational circumstances (prioritizing cases in more optimal organizational conditions). Unfortunately, prison-based treatment referral decision-making has to date, not been studied along the lines of the street-level rationale, making it difficult to underpin our hypothesis with the results found in previous studies. To reinforce the second and third hypotheses brought forward, we are therefore forced to resort to previous studies in adjacent research areas, more specifically; decision-making by other actors in the criminal justice chain. Previous studies have demonstrated the relation between risk to re-offend and judicial decision-making. Criminal justice actors such as judges (Hannah-Moffat, 2012, see also Hartley, Madden & Spohn, 2007; Spohn, 2000; Zatz, 2000) and parole- and probation officers (Carroll & Burke, 1990; Meyer, 2001) often rely on (factors relating to) the risk for re-offending in their judicial decision-making. Earlier work has also shown the significance of organizational circumstances in judicial decision-making processes, as it has been shown that sentencing outcomes often vary between jurisdictional areas (see e.g. Kautt, 2002; Kautt & Spohn, 2002; Kramer & Ulmer, 1996; Ulmer & Johnson, 2004; Johnson, Ulmer & Kramer, 2008), and was found that bureaucracy (Engen & Steen, 2000; Johnson, Ulmer & Kramer, 2008), organization size (Eisenstein, Flemming & Nardulli, 1988), large caseloads (Dixon, 1995; Johnson, 2006; Johnson, Ulmer & Kramer, 2008; Ulmer & Bradley, 2006; Ulmer & Johnson, 2004), and prison

crowding (Johnson, 2006; Peterson & Hagan, 1984; Ulmer & Johnson, 2004) influenced judicial decision-making processes. For example, it was shown by Johnson (2006) that offenders were more often incarcerated in areas with more available jail space. Additionally, studies have shown that parole boards take factors such as prison crowding and resources available into account, with overcrowding and less available resources resulting in more lenience in parole decision-making (e.g. Glaser, 1985; Winfree et al., 1990).

In summary, there is an immense body of work to support Street-Level Bureacracy Theory, and its underlying concepts. This work has recently also been directed at issues relating to access to services, showing that, for some (disadvantaged) populations, access of services for certain clients and civilians is limited. This study aims to extend Street-Level Bureacracy Theory to a new area, by assessing if correctional rehabilitation policies in The Netherlands are delivered in practice, as they were formally designed, thereby studying if incarcerated offenders in The Netherlands have access to the care they are entitled to, and are enrolled in treatment programs fitting with their individual needs. To further examine this issue, this study also aims to study if these treatment referrals can be explained by factors related to risk- and need assessment outcomes, and organizational circumstances. These factors were theoretically expected to be related to the referral of offenders to treatment, but have not been confirmed by research in the field of correctional treatment allocation.

5.4 The current study

As mentioned, effective correctional treatment aimed at reducing re-offending among offenders relies on a proper assessment of risk for future criminal behavior and criminogenic needs, and guiding offenders to programs that fit these risk and need scores (see e.g. Andrews, Bonta & Wormith, 2004; 2006; Latessa, Cullen & Gendreau, 2002). Previous studies have however issued a number of concerns relating to the use of risk assessment instruments to guide offenders to appropriate treatment (Latessa, Cullen & Gendreau, 2002; Taxman & Bouffard, 2000). Street-level bureaucracy theory (Lipsky, 1980) suggests that this is because government employees do not always carry out policies as they were prescribed. It has however to date not been studied if this also applies to prison-based treatment referrals. The purpose of the current study was therefore to explore prison-based treatment referral decision-making processes. The following research questions were addressed: (1) how many offenders were allocated to what types of treatment? And (2) was the correct target population allocated to the right type of treatment? Our final research question read: (3) which factors influenced these treatment-allocation decision-making processes? Inspired by Street-Level Bureaucracy Theory, treatment allocation was supposedly influenced by risk assessment outcomes and variables tied to organizational circumstances. To answer our

research questions proposed, official data were analyzed from a large population-based sample of offenders who participated in a prison-based rehabilitation program in The Netherlands.

5.5 Methods

Sample and Procedure

To address the research question proposed in the current contribution, data were analyzed from a sample of 541 male offenders who, during their time in prison, entered the Dutch Prevention of Recidivism Program. This sample was drawn from a population-based research sample of the Prison Project, which is a large scale, longitudinal research project, studying the effect of imprisonment on the life of detainees and their families in The Netherlands. This sample included all male detainees put in pre-trial detention in The Netherlands between October 2010 and March 2011 who were: between the age of 18 and 65 and were born in The Netherlands (see Dirkzwager & Nieuwbeerta, 2016). Of the 3.981 offenders included in the Prison Project's sample, 3.095 did not meet criteria to qualify as a rehabilitation program candidate (due to not meeting the four month minimal prison sentence criterion) and 345 eligible offenders did or could not participate in the program. This leaves a sample of 541 respondents that entered the Prevention of Recidivism Program.

Several sources of information were used. First of all, risk assessment data were made available by the *Dutch Probation Service*. Second, the *Dutch Custodial Institutions Agency* provided registration data on all respondents. This included information from various prison registration systems and information on the Prevention of Recidivism Program. And finally, to gather organizational information, a telephone-administered questionnaire was held. All Dutch prisons where asked to provide information concerning their prison crowding rates (per prison and per location), staff numbers, and the availability of in-house rehabilitation programs in each year our sample potentially was imprisoned in their facility.

Dependent variables

Data on our dependent variable treatment type (neither; cognitive skill training; lifestyle training; or both) were collected using the Prison Registration System, in which in-depth information concerning the rehabilitation programs of every participant is registered. This involved information about all treatment programs included in an offender's individual rehabilitation program. As mentioned, two main treatment programs are offered within the Prevention of Recidivism Program: cognitive skills training and lifestyle training. Some additional (often non-structured) forms of treatment are offered within Dutch prisons as well, such as counseling by a social worker, but these were not included in the current study due to infrequent application and/or registration and the non-structured character of the treatment.

Treatment type was coded 0 for offenders who were not referred to cognitive skill or lifestyle training; coded 1 for offenders referred to cognitive skills training; coded 2 for offenders who were referred to lifestyle training; and coded 3 for offenders referred to both treatment programs.

Independent variables

Risk scores were drawn from the Dutch-language Recidivism Assessment Scales (RISc), a validated risk assessment tool based on the RNR principles used by probation officers and prisons in The Netherlands. With this instrument, an overall risk indication is made by summing item scores within twelve sections which weighted combine into one overall risk score, with higher scores corresponding to higher risk and need levels. The twelve subsections each relate to a different risk domain: (1) offending history, (2) current offense and pattern of offences (the scores on the first two domains are combined to form one score on past and current offences), (3) accommodation, (4) education; work; and training, (5) financial management and income, (6) relationships with partner and relatives, (7) relationships with friends and other acquaintances, (8) drug misuse, (9) alcohol misuse, (10) emotional well-being, (11) thinking and behavior, and (12) attitudes/orientation (Adviesbureau van Montfoort & Reclassering Nederland, 2004; Bosker, 2009; Van der Knaap, Leenarts, Born & Oosterveld, 2012). Previous studies have indicated that the internal consistency, intraclass-reliability, and predictive validity of the RISc are adequate (Van der Knaap, Leenarts & Nijssen, 2007; Van der Knaap & Alberda, 2009). As mentioned, risk assessment scores are supposed to be used to determine the type of treatment an offender requires. To be more specific: A high score on the criminogenic need scale thinking and behavior determines an offender's need for cognitive skills training. And, following the inclusion criteria for lifestyle training; scores on the domains drug misuse and alcohol misuse are supposed to indicate the need for lifestyle training (substance abuse treatment). However, because of the explorative nature of the current study, weighted scores on each of the twelve scales were included as independent variables in the current study.

Organizational circumstances that were included were remaining prison sentence, prison crowding rate, rehabilitation staff/detainee ratio, and treatment programs on offer (cognitive skill and lifestyle training). The length of an offender's prison sentence was drawn from the Prison Registration System. Prison crowding rate, rehabilitation staff/detainee ratio, and treatment programs on offer were all determined with the help of the Dutch prison service, which provided official records on each prison and each year studied. To determine prison-crowding rates, yearly maximum capacity and occupation numbers were assembled; by which crowding rates per year and per prison location could be calculated. Information regarding rehabilitation staff versus detainee ratios was calculated in a similar fashion.

Control variables

Offender characteristics accounted for in the current study included age, ethnic background (native vs. non-native) and type of offence (violent vs. non-violent). Age was calculated from the prison registration systems by subtracting date of birth from the date of their prison entry. Ethnic background (non-native vs. native) was obtained from risk assessment data (Statistics Netherlands defines a person as having a non-native background if at least one of his/her parents was born abroad). And lastly, offence type (non-violent vs. violent), was drawn from the Criminal Record Office's files.

Analyses

Subjects were first categorized into four mutually exclusive groups, based on the content of their treatment program (0 = standard program with no specific treatment modules; 1 = standard program plus cognitive skills training; 2 = standard program plus lifestyle training; and 3 = standard program plus cognitive skills training and lifestyle training). The percentages of offenders who were categorized into the four groups were calculated, group descriptive statistics on independent variables (risk and need factors, personal characteristics and organizational circumstances) were calculated and group differences analyzed.

To determine if offenders were allocated to the correct type of treatment, actual treatment allocation (made in light of participation in the Prevention of recidivism program) was compared to our own assessment of treatment allocation, determined based on risk and need assessment outcomes and treatments in- and exclusion criteria. In detail: offenders should be referred to cognitive skill training if: the overall risk for re-offending is moderate to high, evidenced by a score of at least 32; there are cognitive deficits, evidenced by a weighted score on the RISc-scale thinking and behavior of at least 4; and an offender is not excluded based on additional grounds[1] (Ministry of Justice, 2007). Offenders should be allocated to lifestyle training if they have drug-, alcohol- and or gambling-abuse problems, evidenced by a score on the RISc-scales drug misuse of at least 3, and/or alcohol misuse of at least 2, and or financial management and income of at least 5, with a minimal score of 2 on item 5.4; who are not excluded on additional grounds[2] (SVG Verslavingsreclassering, 2009). Other, more general criteria accounting for both types of treatment include being older than 18, having sufficient Dutch language skills and not being detained under hospital orders, however offenders in our research group had already qualified for entry in the

1 Which are; not being able to function in a group because of severe psychiatric problems, evidenced by a score of at least 2 on the RISc-item 10.2 or 10.4; great difficulties in family functioning, evidenced by a score of 2 on item 6.3; and severe drug- and or alcohol-misuse, evidenced by a score of 2 on scale 8.2 and or 9.2 (Ministry of Justice, 2007).

2 Which are; a negative attitude towards the sanction imposed, evidenced by a score of 2 on the item 12.2; severe psychiatric problems, evidenced by a score of 2 on the scale 10.2; and being able to function in (group-) treatment, evidenced by a score of 2 on the scale 11.3 (SVG Verslavingsreclassering, 2009).

Prevention of Recidivism Program and therefore already qualified on these grounds. Based on this assessment it was determined how many offenders were correctly and incorrectly allocated, after which group descriptive statistics on independent variables were calculated and group differences analyzed

To study which factors had influenced treatment allocation, bivariate analyses were used to describe the characteristics of the research population and to examine the relation between these characteristics and program allocation. Multinomial logistic regression analysis was then applied to test whether group membership (standard program vs. cognitive skill training; standard program vs. lifestyle training; standard program vs. both) depended on offender characteristics, risk factors and organizational circumstances. Because of the somewhat modest sample-size, and number of independent variables included in our hypothesized explorative model, a set of univariate multinomial logistic regression analyses was first performed to determine Wald and Odds Ratio statistics, after which, based on their p value, independent variables were included in a multivariate model. As suggested by Hosmer and Lemeshow (2000), a cutoff point for entry in the multivariate models of p <.15 was used. Presented results include odds ratios (OR) statistics. An OR, with values range from zero to infinity, greater than 1.00 indicates a higher probability of group membership, while OR of less than 1.00 indicate a decreased probability of group membership.

The independent variables that were included were control variables (age, ethnicity and type of offence), risk factors (offending history, current offense and pattern of offences, accommodation, education, work, and training, financial management and income, relationships with partner, family, and relatives, relationships with friends and acquaintances, drug misuse, alcohol misuse, emotional well-being, thinking and behavior and attitudes and orientation) and organizational circumstances (remaining prison sentence in days, prison crowding rate, rehabilitation staff vs. detainee ratio, and availability of cognitive skill training and lifestyle training).

5.6 Results

Consultation of the Prevention of Recidivism Program registration database showed that of our total research sample of 541 program participants, 50.3 percent of offenders (n=272) were not referred to any specific treatment program, whilst others were referred to cognitive skill training (n=126, 23.3%), lifestyle training (n=61, 11.3%), or both cognitive skill- and lifestyle training (n=82, 15.2%). Relevant sample characteristics for each of the four treatment groups; offenders without cognitive skill or lifestyle training (group 1), offenders who were referred to cognitive skill training (group 2), offenders who were referred to lifestyle training (group 3), and offenders who were referred to both types of treatment (group 4) are summarized in Table 1.

First, regarding our included control variables, it appears that offenders who were referred to cognitive skill training are slightly younger, and are more often of non-native ethnic background. The analyses conducted showed that, in general, offenders who were not referred to a criminogenic need-specific treatment module were older (*M*=31.5), compared to offenders who were referred to cognitive skill training (*M*=26.1), and both types of treatment (*M*=28.9). Furthermore, offenders referred to cognitive skill training were younger, compared to offenders who were referred to lifestyle training (*M*=31.0). Regarding ethnicity, post-hoc analyses showed that offenders with a non-native ethnic background were overrepresented in the cognitive skill-training group.

Second, it seems that the results on each criminogenic need scale are quite divers. In general however, it appears that offenders who were allocated to lifestyle training reported somewhat higher scores on a range of criminogenic need scales, and can therefore be considered somewhat more problematic. Additionally it must be mentioned that, perhaps contrary to what would be expected, it is not the case that offenders who were not referred to any program significantly and consequently score lower on the range of criminogenic need scales, compared to those who were referred to a criminogenic need-specific treatment module. In more detail; Table 1 shows that offenders with lower scores on the domain offending history and current offence,, were mostly among those that were not referred to any program (*M*=17.3), compared to offenders that were referred to lifestyle training (*M*=21.3) and both types of treatment (*M*=21.4). With respect to the risk scale accommodation, it was shown that offenders with the lowest scores, were mostly referred to cognitive skill training (*M*=3.2), compared to offenders that were referred to neither (*M*=4.1), or both (*M*=4.9). Next, regarding the scale financial management and income, post-hoc analysis pointed out that offenders who were not referred to treatment, scored lower (*M*=4.5), compared to offenders that were referred to lifestyle training (*M*=6.0), or both types of treatment (*M*=6.3). Offenders referred to cognitive skill training also scores lower (*M*=4.9), compared to offenders referred to both. Another scale on which groups were shown to differ is relationships with friends and acquaintances. Program participants were shown to score the lowest (*M*=5.8), compared to those referred to both cognitive skill training (*M*=6.8), types of treatment (*M*=8.0). Offenders who were referred to both, also differed significantly from those referred to lifestyle training (*M*=6.1). Further, our analyses pointed out a similar pattern for the risk scales drug misuse, and alcohol misuse. Offenders who were not referred to a specific treatment module, and therefore followed a standard treatment program, on average, scored higher (*M*=5.1 and *M*=1.5 respectively) compared to offenders that were referred to cognitive skill training (*M*=3.9 and *M*=1.1), but scored lower on drug and alcohol misuse than those referred to lifestyle training (*M*=8.4 and *M*=8.3), or both cognitive skill and lifestyle training (*M*=2.2 and *M*=2.3). The latter two also differed significantly from offenders

in the second (cognitive skill training) group. With respect to scores on emotional well-being, it was shown that offenders in the group referred to cognitive skill training, differed significantly (M=1.8), from offenders referred to neither types of treatment (M=2.4), lifestyle training (M=2.4), and both treatment types (M=2.3), with the cognitive skill-training group reporting the lowest scores. And finally, concerning the risk scale thinking and behavior, it was shown that offenders that were not referred to treatment, reported lower scores (M=7.3), compared to offenders referred to cognitive skill training (M=8.4), lifestyle training (M=8.4), and both (M=8.9).

A third and final set of variables that was tested for group differences regarded organizational circumstances. As shown in Table 1, the only group differences found concerned the remaining prison sentence. It was shown that offenders who were allocated to lifestyle training, reported lower remaining prison sentences (M=387.0) than offenders who were referred to neither (732.7), or both (735.1) types of treatment. Perhaps this is caused by the fact that these offenders (i.e. offenders who are addicted) committed specific types of crimes, for which they had received rather mild sentences. No other group differences were reported.

Table 1. Group characteristics offenders allocated to no treatment, cognitive skill training, lifestyle training and both (N=541)

	1. Neither (*n*=272)	2. Cognitive skill training (*n*=126)	3. Lifestyle training (*n*=61)	4. Both (*n*=82)	Total (*N*=541)	
	M(SD)/%	*M(SD)*/%	*M(SD)*/%	*M(SD)*/%	*M(SD)*/%	Sig.
Control variables						
Age (in years)	31.5 (11.1)	26.1 (8.3)	31.0 (10.0)	28.9 (10.0)	29.8 (10.4)	*** 1/2 1/4 2/3
Ethnicity (native)	61.8	41.3	60.7	65.9	57.5	*** 1/2 2/3 2/4
Offence type (non-violent offence)	61.3	64.5	63.9	65.9	63.0	
Risk factors						
Offending history & current offence (0-50)	17.4 (13.1)	18.8 (12.7)	21.3 (13.6)	21.4 (11.5)	18.8 (12.9)	* 1/3 1/4
Accommodation (0-12)	4.1 (4.3)	3.2 (3.5)	4.4 (4.1)	4.9 (4.4)	4.0 (4.2)	* 1/2 2/4
Education, work & training (0-20)	9.0 (6.9)	9.2 (6.1)	9.5 (6.6)	10.9 (6.3)	9.4 (6.6)	
Financial management & income (0-12)	4.5 (3.8)	4.9 (3.4)	6.0 (3.9)	6.3 (3.8)	5.0 (3.8)	*** 1/3 1/4 2/4
Relationships with partner & relatives (0-6)	2.7 (1.8)	2.4 (1.6)	2.9 (1.8)	2.8 (1.6)	2.7 (1.7)	
Relationships with friends & acq. (0-15)	5.8 (4.5)	6.8 (4.0)	6.1 (4.0)	8.0 (4.3)	6.4 (4.4)	** 1/2 1/4 3/4
Drug misuse (0-15)	5.1 (5.3)	3.9 (4.5)	8.4 (4.6)	8.3 (4.5)	5.7 (5.2)	*** 1/2 1/3 1/4 2/3 2/4
Alcohol misuse (0-5)	1.5 (1.9)	1.1 (1.6)	2.2 (1.9)	2.3 (2.0)	1.6 (1.9)	*** 1/2 1/3 1/4 2/3 2/4
Emotional well-being (0-6)	2.4 (1.8)	1.8 (1.4)	2.4 (1.6)	2.3 (1.6)	2.2 (1.7)	** 1/2 2/3 2/4
Thinking & behavior (0-12)	7.3 (3.5)	8.4 (2.3)	8.4 (2.8)	8.9 (2.4)	7.9 (3.1)	*** 1/2 1/3 1/4
Attitudes & orientation (0-15)	6.1 (4.8)	6.0 (4.3)	7.1 (4.7)	7.3 (4.5)	6.4 (4.6)	
Organizational circumstances						
Remaining prison sentence (in days)	732.7 (1132.2)	613.7 (561.2)	387.0 (429.6)	735.1 (780.8)	666.4 (916.8)	* 1/3 3/4
Prison crowding rate	0.9 (0.1)	0.9 (0.1)	0.9 (0.1)	0.9 (0.1)	0.9 (0.1)	
Rehabilitation staff/detainee ratio	116.9 (68.9)	107.3 (64.7)	103.7 (61.2)	109.8 (64.4)	112.1 (66.5)	
Cognitive skill training available (no)	21.0	15.1	16.4	17.1	18.5	
Lifestyle training available (no)	23.2	19.8	18.0	18.3	21.1	

Note: Behind significant levels it is demonstrated which groups differed. For example: 1/2 means post-hoc analysis showed there was a significant difference between group 1 and group 2.
* $p < .05$ ** $p < .01$ *** $p < .001$.

Correct treatment referrals based on risk scores

As mentioned, treatment referrals should be made based on risk and need assessment outcomes. We will now explore if offenders referred to a standard program, standard program plus cognitive skill training, standard program plus lifestyle training, or standard program plus both, were, based on their risk assessment scores, referred to the correct type of treatment.

An analyses of the risk assessment scores of our research group of 541 program participants has shown that, based on the official inclusion and exclusion criteria set, 215 offenders (39.7%) should have been referred to a standard program (no treatment), and 326 offenders (60.3%) should have been referred to either cognitive skill training, lifestyle training, or both. However, when comparing our assessment with the actual treatment programs that our research group of program participants was referred to however, great differences were revealed. As shown in Table 2, 72 offenders (26.8% of all offenders allocated) were allocated to treatment; while they did not qualify for either cognitive skill- or lifestyle training (or both) based on risk assessment outcomes. Second, 129 offenders (47.4 percent of all offenders not allocated) were not allocated to treatment; while they qualified for either cognitive skill- or lifestyle training (or both) based on risk assessment outcomes.

Table 2. Crosstab treatment allocation based on PoR program versus own analyses (N=541)

	Prevention of Recidivism Program		
	Allocated	Not allocated	Total
Should be allocated based on risk assessment outcomes	197 (64.9%)	129 (47.4%)	326
Should not be allocated based on risk assessment outcomes	72 (26.8%)	143 (52.6%)	215
Total	269 (100%)	272 (100%)	541

* A grey block indicates a wrongful in- or exclusion

A much more detailed overview of the type of treatment program (standard, standard plus cognitive skill training, standard plus lifestyle training and standard plus both) offenders were, and should have been referred to (based on our analysis) is provided in Appendix A, Table A1. This table revealed a third type of error, and showed that there were 101 offenders (51.3% of the total of 197 offenders allocated to a treatment program) who were referred to the wrong type of treatment. This was, for instance, the case when offenders qualified for lifestyle training based on risk assessment outcomes, and were referred to cognitive skill training by the Prevention of Recidivism Program. This leaves only 239 who could be considered correctly (not) allocated to treatment, this amounts to 44.2 percent of our research sample of 541 offenders.

To further explore the groups of correctly classified offenders and incorrectly classified offenders (incorrectly allocated, incorrectly not allocated and allocated to an incorrect treatment type), an analysis on background characteristics was conducted, the results of which are presented in Table 3. As shown, the group of correctly classified offenders differed from incorrectly classified offenders, on a considerable number of variables. In general, it was shown that offenders, who were referred to treatment in line with their risk and need assessment outcomes, were more often imprisoned for having committed a non-violent offence, than offenders who were incorrectly classified. They also differed on a large number of risk assessment domains, where they score lower (than incorrectly classified offenders) on the domains offending history and current offence; education, work and training; financial management and income; drug misuse; thinking and behavioral and attitudes and orientation. And finally, correctly classified offenders were, on average, imprisoned for slightly less days, than offenders who were incorrectly classified. In general, it appears that offenders who were correctly assigned to treatment represent a lower-risk group of offenders, who received a slightly less severe sentence for having committed a less severe crime.

Although our analyses make clear that inaccuracies seem to be present in referrals made, it must be mentioned that the analysis conducted was solely based on risk and need assessment outcomes; consequently, our analysis did not take into account any additional factors that may sometimes also influences treatment referrals, such as suitability for (group) treatment. These (not incorporated) factors may not be included in a risk assessment instrument, but could instead be observed in personal engagement with an offender, after which it can influence treatment referral decisions. The presented results are therefore perhaps a somewhat simplistic representation of correctional treatment referral practices, since we only had access to data, and could not interact with people. However, the fact that treatment was not in line with risk assessment outcomes in so many cases leaves us to wonder about the quality of current practices, and raises the question as to which factors *have* influenced treatment referrals.

Table 3. Group characteristics correctly classified offenders, and three types of incorrectly classified offenders (N=541)

	Correctly classified (*n*=239)	Incorrectly classified, incorrect allocation (*n*=72)	Incorrectly classified, incorrect non-allocation (*n*=129)	Incorrectly classified, incorrect treatment type (*n*=101)	Total (*N*=541)	
	M(SD)/%	*M(SD)*/%	*M(SD)*/%	*M(SD)*/%	*M(SD)*/%	Sig.
Offender characteristics						
Age (in years)	29.9 (10.8)	31.4 (12.0)	29.2 (10.3)	29.2 (8.4)	29.8 (10.4)	
Ethnicity (native)	55.2	58.3	62.0	56.4	57.5	
Offence type (non-violent offence)	30.4	23.9	45.7	50.5	37.0	***1/3 1/4 2/3 2/4
Risk factors						
Offending history & current offence (0-50)	17.0 (13.0)	19.7 (13.0)	19.3 (12.2)	21.6 (13.0)	18.8 (12.9)	*1/4
Accommodation (0-12)	3.9 (4.2)	5.9 (4.2)	3.5 (4.0)	3.8 (4.0	4.0 (4.2)	**1/2 2/3 2/4
Education, work & training (0-20)	8.4 (6.8)	11.7 (7.2)	9.8 (6.3)	9.6 (5.8)	9.4 (6.6)	**1/2 2/4
Financial management & income (0-12)	4.5 (3.7)	6.1 (3.9)	4.5 (3.8)	6.1 (3.6)	5.0 (3.8)	***1/2 1/4 2/3
Relationships with partner & relatives (0-6)	2.5 (1.9)	3.6 (1.9)	2.6 (1.5)	2.4 (1.4)	2.7 (1.7)	***1/2 2/3 2/4
Relationships with friends & acq. (0-15)	6.0 (4.6)	7.5 (4.7)	6.2 (4.1)	6.8 (4.0)	6.4 (4.4)	
Drug misuse (0-15)	4.7 (5.4)	7.4 (5.7)	5.4 (4.9)	7.2 (4.4)	5.7 (5.2)	***1/2 1/4 2/3 3/4
Alcohol misuse (0-5)	1.4 (1.9)	2.0 (2.1)	1.6 (1.8)	1.9 (1.7)	1.6 (1.9)	
Emotional well-being (0-6)	2.2 (1.8)	3.1 (1.9)	2.0 (1.5)	2.0 (1.3)	2.2 (1.7)	***1/2 2/3 2/4
Thinking & behavior (0-12)	7.4 (3.4)	9.2 (3.1)	7.8 (2.8)	8.6 (2.2)	7.9 (3.1)	***1/2 1/4 2/3 3/4
Attitudes & orientation (0-15)	5.6 (4.8)	8.1 (5.3)	6.7 (4.3)	6.8 (3.9)	6.4 (4.6)	**1/2 1/3 1/4 2/3
Organizational circumstances						
Prison sentence (in days)	774.3 (1083.3)	610.0 (720.5)	572.4 (855.2)	571.4 (624.8)	666.4 (916.8)	
Prison crowding rate	92.1 (10.2)	94.4 (6.0)	93.2 (9.6)	92.5 (10.9)	97.9 (9.8)	
Rehabilitation staff/detainee ratio	115.3 (67.0)	103.8 (52.7)	113.7 (70.9)	108.3 (67.7)	112.1 (66.5)	
Cognitive skill training available (no)	79.1	81.9	80.6	88.1	81.5	
Lifestyle training available (no)	76.6	81.9	78.3	83.2	78.9	

* p < .05 ** p < .01 *** p < .001.

Exploring decision-making processes: Bivariate analyses

As shown, treatment referrals made in light of the Prevention of Recidivism Program are not made fully in line with risk and need assessment outcomes. Therefore, we will now explore which factors have influenced these decision-making processes. Before turning to the results of our multivariate model, a set of univariate analysis was performed, to test each variable that, based on the theoretical framework, was believed to determine treatment referral decision-making processes. As mentioned, variables were included in the multivariate models explaining treatment referral decision making if they had a significant univariate test, as evidenced by a *p* value cutoff point of 0.15 (see Hosmer & Lemeshow, 2000). Based on the results presented in Table 4, the control variables age and ethnicity were included, all eleven risk factor domains were included, and organizational factors prison sentence in days, and prison crowding rate were included in our multivariate multinomial logistic regression analysis treatment group membership.

Exploring decision-making processes: Multivariate analyses

The results of the multinomial regression analysis, testing the influence of indicators of risk factors and organizational circumstances on treatment group membership, are presented in Table 5. Presented results above include odds ratios (OR) statistics. Offenders who were not referred to cognitive skill or lifestyle training (standard treatment) represent the reference group.

The results presented in Table 5 show that treatment group membership was significantly associated with age. Being older appeared to decrease chances of being referred to cognitive skill training, compare to not being referred to treatment (OR=0.97). Ethnic background did not seem to determine treatment group membership.

With respect to risk factors included in the multivariate model, a broad range of effects was found, each of which will be discussed by risk domain. First, concerning the risk domain education, work and training, results pointed out that a higher score on this domain, decreased referrals to substance abuse training (lifestyle training), compared to not being referred to treatment (OR=0.93). Concerning problem relating to financial management and income, it was shown that more (severe) risk scores increased chances of being referred to cognitive skill training (OR=1.11), lifestyle training (OR=1.11), as well as both types of treatment (OR=1.09). Contrary, higher scores in the area of relationships with friends and acquaintances appeared to lower chances of lifestyle training treatment group membership, compared to no treatment group membership (OR=0.91). Continuing, higher scores on the criminogenic need scale drug misuse decreased odds of cognitive skill training group membership by 6 percent per point lower scored (OR=0.94), whilst it increased odds of lifestyle training group membership by 18 percent per scored point (OR=1.18) and both treatment group membership by 12 percent per scored point (OR=1.12). With respect to alcohol misuse, it was shown that more severe problems increased chances of

being referred to both types of treatment, compared to not being referred (OR=1.24). Higher reported scores on the risk domain emotional well-being seemed to quite heavily decrease ones odd of being among the group of offenders referred to both cognitive skill training (OR=0.66), lifestyle training (OR=0.75), as well as both types of treatment (OR=0.68). Scores on the criminogenic need scale thinking and behavior increased chances of treatment referrals to cognitive skill training (OR=1.39), and to cognitive skill and lifestyle training (OR=1.29). And lastly, a higher score on the scale attitudes and orientation decreased chances of being referred to cognitive skill training, compared to being referred to neither types of treatment (OR=0.92).

Concerning context features, only one significant result was reported. A longer prison sentence (measured in days) increased odds of both types of treatment group membership, compared to not being referred to treatment (OR = 1.00). None of the remaining contextual features was associated with group membership.

The overall model was found to be statistically significant (p = .000). Statistics also indicated that the model was a good fit for the data, evidenced by Nagelkerke's R2 statistics of .31 and Cox and Snell statistics of .34.

Table 4. Bivariate Odds ratios independent variables on treatment allocation (N=541)

	Cognitive skill training VS standard program			Lifestyle training VS standard program			Cognitive skill training and lifestyle training VS standard program		
	OR	CI	*p*	OR	CI	p	OR	CI	*p*
Control variables									
Age (in years)	0.94	[0.92 – 0.97]	.000*	1.00	[0.97 – 1.02]	.748	0.98	[0.96 – 1.00]	.060*
Ethnicity (native)	2.30	[1.50 – 3.54]	.000*	1.05	[0.59 – 1.85]	.872	0.84	[0.50 – 1.41]	.502
Offence type (non-violent offence)	0.87	[0.56 – 1.35]	.535	0.89	[0.50 – 1.59]	.697	0.82	[0.49 – 1.38]	.452
Risk factors									
Offending history and current offence	1.01	[0.99 – 1.03]	.319	1.02	[1.00 – 1.05]	.033*	1.02	[1.01 – 1.04]	.015*
Accommodation	0.94	[0.89 – 1.00]	.038*	1.02	[0.95 – 1.09]	.561	1.05	[0.99 – 1.11]	.125*
Education, work and training	1.00	[0.97 – 1.04]	.805	1.01	[0.97 – 1.06]	.608	1.04	[1.01 – 1.09]	.032*
Financial management and income	1.03	[0.97 – 1.09]	.302	1.11	[1.03 – 1.20]	.006*	1.14	[1.07 – 1.22]	.000*
Relationships with partner and relatives	0.89	[0.78 – 1.01]	.074*	1.09	[0.93 – 1.28]	.309	1.02	[0.88 – 1.18]	.798
Relationships with friends and acquaintances	1.06	[1.01 – 1.11]	.030*	1.02	[0.95 – 1.09]	.578	1.13	[1.06 – 1.20]	.000*
Drug misuse	0.95	[0.91 – 1.00]	.032*	1.14	[1.07 – 1.21]	.000*	1.13	[1.07 – 1.19]	.000*
Alcohol misuse	0.86	[0.76 – 0.98]	.023*	1.19	[1.03 – 1.38]	.019*	1.23	[1.08 – 1.41]	.002*
Emotional well-being	0.79	[0.68 – 0.91]	.001*	1.02	[0.86 – 1.20]	.851	0.97	[0.84 – 1.13]	.706
Thinking and behavior	1.12	[1.04 – 1.21]	.003*	1.13	[1.02 – 1.24]	.020*	1.22	[1.10 – 1.34]	.000*
Attitudes and orientation	0.99	[0.95 – 1.04]	.803	1.04	[0.98 – 1.11]	.167	1.06	[1.00 – 1.11]	.053*
Organizational circumstances									
Remaining prison sentence (in days)	1.00	[1.00 – 1.00]	.245	1.00	[1.00 – 1.00]	.006*	1.00	[1.00 – 1.00]	.985
Prison crowding rate	0.56	[0.07 – 4.31]	.578	1.31	[0.07 – 23.29]	.855	26.24	[0.90 – 767.06]	.058*
Rehabilitation staff/detainee ratio	1.00	[0.99 – 1.00]	.194	1.00	[0.99 – 1.00]	.187	1.00	[1.00 – 1.00]	.423
Cognitive skill training available (no)	1.49	[0.85 – 2.64]	.167	1.35	[0.65 – 2.83]	.423	1.29	[0.68 – 2.46]	.442
Lifestyle training available (no)	1.22	[0.72 – 2.05]	.458	1.37	[0.67 – 2.79]	.385	1.35	[0.72 – 2.52]	.352

Note: if $p < .15$, the variable will be included in the multivariate model (*)

Table 5. Multinomial regression analyses on treatment allocation (N=541)

	Cognitive skill training VS standard program			Lifestyle training VS standard program			Cognitive skill training and lifestyle training VS standard program		
	OR	CI	Sig.	OR	CI	Sig.	OR	CI	Sig.
Control variables									
Age (18 – 65)	0.97	[0.94 – 1.00]	*	0.98	[0.95 – 1.02]		0.97	[0.94 – 1.00]	
Ethnicity (non-native)	0.98	[0.86 – 1.12]		0.93	[0.81 – 1.08]		1.02	[0.85 – 1.22]	
Risk indicators									
Offending history and current offence	1.02	[0.99 – 1.04]		1.01	[0.98 – 1.04]		1.00	[0.97 – 1.03]	
Accommodation	0.96	[0.88 – 1.03]		0.96	[0.87 – 1.05]		1.00	[0.92 – 1.09]	
Education, work and training	0.97	[0.93 – 1.03]		0.93	[0.87 – 0.99]	*	0.96	[0.90 – 1.01]	
Financial management and income	1.11	[1.03 – 1.20]	**	1.11	[1.00 – 1.22]	*	1.09	[1.00 – 1.19]	*
Relationships with partner and relatives	0.97	[0.81 – 1.17]		1.11	[0.88 – 1.39]		0.90	[0.73 – 1.12]	
Relationships with friends and acquaintances	1.06	[0.98 – 1.13]		0.91	[0.83 – 1.00]	*	1.05	[0.96 – 1.14]	
Drug misuse	0.94	[0.88 – 0.99]	*	1.18	[1.09 – 1.28]	***	1.12	[1.05 – 1.45]	**
Alcohol misuse	0.91	[0.78 – 1.06]		1.10	[0.93 – 1.32]		1.24	[0.54 – 0.86]	*
Emotional well-being	0.66	[0.54 – 0.82]	***	0.75	[0.58 – 0.97]	*	0.68	[1.09 – 1.49]	**
Thinking and behavior	1.39	[1.22 – 1.59]	***	1.16	[0.99 – 1.37]		1.28	[0.88 – 1.04]	**
Attitudes and orientation	0.92	[0.85 – 0.99]	*	1.00	[0.91 – 1.10]		0.96	[0.88 – 1.04]	
Context features									
Remaining prison sentence (in days)	1.00	[1.00 – 1.00]		1.00	[1.00 – 1.00]		1.00	[1.00 – 1.00]	**
Prison crowding rate	0.31	[0.03 – 3.54]		0.63	[0.02 – 19.16]		6.30	[0.15 – 274.24]	

Note: Overall model Wald χ^2 (183.964, 45), p <..001, Cox and Snell R^2 = .307, Nagelkerke R^2 = .336.
* p < .05 ** p < .01 *** p < .001.

5.7 Discussion

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). Studies have however shown that a number of problems exist regarding the implementation of risk assessment in correctional practices (see Gendreau & Goggin, 1997; Latessa, Cullen & Gendreau, 2002; Taxman & Bouffard, 2000), and have indicated that risk assessment may seldom be used to allocate offenders to treatment, even if policies describe such a risk and need-based approach (Latessa, Cullen & Gendreau, 2002; Taxman & Bouffard, 2000). Lipsky's Street Level Bureaucracy Theory (1980) suggests that this could be explained by the fact that public service employees do not always apply policies as prescribed. The goal of the study discussed in this chapter was twofold. First, this study aimed to determine if treatment referrals made in light of the Dutch Prevention of Recidivism were made in line with risk and need assessment outcomes, by means of which it was tested whether discrepancies were present between policy as prescribed, and policies as carried out in practice, as it was expected based of the work of Lipsky (1980). Second, this study aimed to assess which factors determined treatment allocation decision-making processes. Inspired by Street Level Bureaucracy Theory (1980) and supported by previous studies in the broad field of criminal justice research, risk assessment outcomes and organizational circumstances were expected to determine prison-based treatment-referrals. The research questions proposed were: (1) how many offenders were allocated to what types of treatment? (2) Was the correct target population allocated to the right type of treatment? (3) Which factors influenced treatment-allocation decision-making processes? To examine our research questions, registration data were analyzed from a sample of 541 male offenders who participated in the prison-based Prevention of Recidivism Program in The Netherlands.

Main results

The results presented in this Chapter first of all showed that over half of the detainees included in our sample were not referred to any specific treatment program. An analysis on background factors revealed that there were some differences between the groups of offender's allocated to different types of treatment, the most striking of which was perhaps the fact that offenders who were not referred to a criminogenic need-specific program did *not* score lower with respect to criminogenic need scales, compared to those who *were* referred to a criminogenic need-specific treatment module.

Second, the current study made clear that treatment allocation in light of the Prevention of Recidivism Program was not at all times in line with risk and need assessment outcomes. As a result, over half of our research group was incorrectly classified; i.e. not referred to a treatment program that was in line with their risk assessment outcomes. In most cases, this resulted in offenders than were referred to a standard treatment program (with

no criminogenic need-specific treatment modules) that should have been referred based on their risk and need assessment outcomes. Further examination of the characteristics of correctly and incorrectly classified offenders revealed that offenders who were imprisoned for having committed a less severe crime, who scored lower on several risk assessment subscales, were more often correctly classified. This leads us to conclude that high risk offenders were more often incorrectly (not) referred to treatment.

Subsequently it was studied which factors influenced treatment referrals to specific treatment programs. Results showed that control variables (demographics), in general, did not influence treatment group membership, with the exception of age; it was shown that an older age negatively influenced treatment referrals to cognitive skill training. A large number of risk factors did however influence treatment referrals. In general, it was shown that higher scores on the scales financial management and income, alcohol misuse and thinking and behavior increased referrals to treatment, were higher scores regarding the domains education, work and training, relationships with friends and acquaintances, emotional well-being and attitudes and orientation decreased referrals, while results concerning the scale drug-use were mixed. Additionally, organizational circumstances were not shown to be related to treatment-group membership, with the exception of a longer prison sentence, which increased referrals to a combination of cognitive skill and lifestyle training.

In conclusion, since treatment allocation practices were not fully in line with prescribed standards, this study supports the premise made by street-level bureacracy theory (Lipsky, 1980), suggesting that public service employees do not always apply policies as prescribed. This discrepancy between policy and practice was as hypothesized, and also congruent with the results of previous work in various public service areas (see Brodkin, 2012 for an overview). The consequence of this discrepancies with policy as written and policy as produced is that Dutch prisoners who qualify for (and are in need of) treatment, do not have access to the services their entitled to. This result is (sadly) in line with outcomes of previous work in the broad area of government services, concluding that vulnerable or disadvantaged populations often experience limited access to services and care (see Brodkin & Majmundar, 2010; Monnat, 2010; Moynihan & Herd, 2010; Riccucci, 2005; Wenger & Wilkins, 2009).

Additionally, relating to our third and final research question, it can be concluded that referrals made in as part of participation in the Dutch prison-based Prevention of Recidivism Program were *influenced* by a broad range of risk and need assessment scores. However, much broader then is prescribed (and perhaps allowed) by policy guidelines, whereby it was shown that offenders with a lower risk and/or less severe criminogenic needs, *easier* clients, were more often correctly classified. This was in line with our second hypothesis, and indicates coping, and *creaming* in particular; giving priority to decisions that involve easier and manageable clients and cases (Lipsky, 1980; 2010), which was also found to be applied in other areas of

public service (Tummers et al., 2015). Organizational circumstances were however, contrary to expected since factors such as prison overcrowding were shown to influence other criminal justice actors such as parole boards (Glaser, 1985; Winfree et al., 1990), not found to be of much influence on (correct and incorrect) treatment referrals. To finish, we have to conclude that a large proportion of the variance in treatment allocation between our studied groups remained unexplained. Consequently, it also appears that there are other factors involved, not included in this study, which no doubt also influenced treatment referral decision-making processes.

Since studies have shown that treatment can only be effective if it adheres to RNR-principles (for example, see Andrews et al., 1990; Cullen & Gendreau, 2001; Gendreau, 1996; Gendreau, Little & Goggin, 1996; Lipsey & Cullen, 2007; Lowenkamp, Latessa & Holsinger, 2006; Lowenkamp, Latessa & Smith, 2006), the fact that such a large proportion of offenders ended up in treatment not in line with their risk and need assessment scores leads us to temper our expectations regarding the effectiveness of treatment modules applied within the scope of the Prevention of Recidivism Program. Nonetheless, while shortcomings in a risk-need driven approach were certainly demonstrated, problems identified by previous work (see e.g. Latessa, Cullen & Gendreau, 2002; Taxman & Bouffard, 2000), proposing that proper risk assessment was often not conducted, and was seldom used to allocate offenders to treatment, were not found.

Limitations

Although this study represents a major advancement in the field of correctional rehabilitation research, there are some limitations that should be mentioned. A first shortcoming is perhaps related to the explorative model presented in the current study. Inspired by Street Level Bureaucracy Theory, it was tested if variables tied to two specific domains were related to prison-based treatment referral decision-making processes. Because of the innovatory nature of this study, the current study could not rely on variables appointed by theory and previous studies, and therefore had to create a set of variables that were believed to be salient. Although well substantiated, since the selected variables were based on similar studies conducted in adjacent research fields, other factors could have also contributed to treatment referral processes. It requires further study to develop the model introduced in this study, and to fully comprehend prison-based treatment referral decision-making processes.

A second set of limitations were related to the study's data and design. Firstly, this study was conducted in The Netherlands, and studied a sample of male detainees that were born in The Netherlands. The results can therefore not be generalized to rehabilitation programs implemented in other geographic regions, or to offenders detained in The Netherlands who were born abroad. Second, our measures included were limited to official registration (risk assessment) data and did not include background information on prison staff members making treatment referrals. Also measures of orga-

nizational circumstances were fairly broad and limited. It would be a great advancement if future research could incorporate more specific measures on both prison staff-members, and prisons.

Appendix A: Tables

Table A1. Crosstab treatment referrals based on PoR program versus own analysis

	Prevention of Recidivism Program referrals				
	Standard	Cog. Skill training	Lifestyle training	Both	Total
Eligible for standard program, based on risk scores	143 (52.6%)	29 (23.0%)*	18 (29.5%)	25 (30.5%)	215
Eligible for cog. skill training, based on risk scores	58 (21.3%)	47 (37.3%)	13 (21.3%)	16 (19.5%)	134
Eligible for lifestyle training, based on risk scores	33 (12.1%)	12 (9.5%)	17 (27.9%)	9 (11.0%)	71
Eligible for both, based on risk scores	38 (14.0%)	38 (30.2%)	13 (21.3%)	32 (39.0%)	121
Total	272 (100%)	126 (100%)	61 (100%)	82 (100%)	541

* A grey block indicates a wrongful in- or exclusion