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

Bosma, A.Q.

6 Completion of a prison-based treatment program■

6.1 Introduction

Correctional treatment programs can contribute to the successful re-integration of ex-detainees in communities and can decrease re-offending rates among offenders. This was confirmed by a large number of empirical studies (see e.g. Andrews, 1995; Andrews & Bonta, 1994; Andrews et al., 1990; Cullen & Gendreau, 2001; Day & Howells, 2002; Gendreau, 1996; Gendreau, Little & Goggin, 1996; Lipsey & Cullen, 2007; Lipsey & Wilson, 1993; Palmer, 1992). As treatment was shown to be a viable option, in an attempt to tackle high re-offending rates among ex-detainees, prison-based rehabilitation programs were implemented throughout Northern America en Western Europe (see Hannah-Moffat, 2005; Jolley & Kerbs, 2010; McSweeney, Turnbull & Hough, 2008). In The Netherlands, for example, attempts to reduce re-offending rates among ex-detainees resulted in the implementation of the *Prevention of Recidivism Program*, a prison-based rehabilitation program aimed to help offenders desist from future criminal behavior (Dutch Prison Service & Dutch Probation Organizations, 2007).

Effective prison-based offender rehabilitation programs are typically developed in line with the principles included in the *Risk-Need-Responsivity* model [RNR] of crime prevention and correctional rehabilitation (Andrews, Bonta & Hoge, 1990). This model, which has become the standard for the assessment and treatment of offenders (Blanchette & Brown, 2006; Ward, Mesler & Yates, 2007), rests on three core principles: The *risk* principle rests on the notion that criminal behavior can be predicted and suggests that treatment intensity should be adjusted to the extent to which there is risk for reoffending. The *need* principle asserts that correctional programs should address factors that have shown to be related to repeated offending (see Bonta, Law & Hanson, 1998; Hanson & Morton-Bourgon, 2004 & Gendreau, Little & Goggin, 1996). And the *responsivity* prescribes how behavioral pro-

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grams should be delivered, meaning that programs are best delivered in line with an offender's abilities, treatment readiness, and other personal characteristics (see Andrews, 1995; Andrews & Bonta, 2010; Andrews, Bonta & Hoge, 1990; Andrews & Dowden, 1999; Lowenkamp & Latessa, 2005). An immense body of work has shown that correctional treatment programs are most effective if they adhere to the RNR principles, and have demonstrated that effectiveness increases if more principles were met (for example, see Andrews et al., 1990; Cullen & Gendreau, 2001; Gendreau, 1996; Gendreau, Litlle & Goggin, 1996; Lipsey & Cullen, 2007; Lowenkamp, Latessa & Holsinger, 2006). In the case of prison-based programs (in contrast to program delivered in the community), studies have shown that decreases in recidivism rates of 17 percent can be achieved (Andrews & Bonta, 2006; Lipsey & Wilson, 1993). This treatment effect may perhaps seem trivial, but is certainly not marginal in comparison to the success rates of other (more accepted) forms of treatment, such as chemotherapy in case of breast cancer (treatment effect of .11) or bypass surgery in case of a cardiac event (treatment effect of .15; see Andrews & Bonta, 2006; Lipsey & Wilson, 1993).

Although we know how to design programs in order to reach a maximum treatment effect, correctional treatment programs can only be effective if offenders eligible for treatment actually engage in and complete such treatment programs. Unfortunately, previous studies have suggested that attrition (or drop-out) rates in correctional rehabilitation programs are substantial. Even in the case of prison-based programs, where one may assume that it is easier to get offenders to complete their program, as was shown by a recent meta-analysis by Olver, Stockdale and Wormith (2011), in which it was concluded that a considerable number of those who participated in treatment failed to complete. The focus of this chapter is therefore on (determinants of) treatment completion in a correctional (prison-based) treatment program that was implemented nation-wide in The Netherlands; the aforementioned Prevention of Recidivism Program.

Imprisonment and prison-based treatment programs in The Netherlands

The *Prevention of Recidivism Program* is a prison-based rehabilitation program meant for incarcerated offenders with a prison sentence of at least four months, which was implemented nation-wide in 2007 (Dutch Prison Service & Dutch Probation Organizations, 2007).[1] In line with the above-mentioned RNR principles, the key components of the Prevention of Recidivism Program are: (1) proper assessment of risk for recidivism and criminogenic needs, (2) application of criminogenic need-specific behavioral interventions that fit an offender's risk and need assessment scores (Van der Linden, 2004).

1 Note that the program was replaced by a new policy measure that was implemented in March 2014, which uses the same risk/need based approach, but in which offenders can only take part of they have earned the right to engage, by expressing their willingness to change their criminal ways, and by showing pro-social behavior for a minimum of 6-weeks straight.

Currently, the two main types of behavioral interventions implemented in Dutch prisons are *cognitive Skills Training* and *Cognitive Skills Plus Training* (an extended version meant for detainees with limited mental capacities), aimed to improve cognitive skills that are necessary in order to independently live, develop and function in society, and a standard and long version of the *lifestyle Training for Addicted Offenders*, designed to help offenders cope with alcohol- and/or drug addictions. Two other criminogenic need-specific programs include *Job Skill Training,* meant for offenders with limited work experience and/or problems with getting or maintaining a job, and a Dutch version of the *Aggression Replacement Training*, which aims to help offenders cope with violence and anger. However, the latter two are applied rarely (Bosma, Kunst & Nieuwbeerta, 2013). As mentioned, offenders are allocated to criminogenic need-specific treatment modules based on risk and need scores. If risk and need scores are low, they may not qualify for any program. If this is the case, the can take part in the Prevention of Recidivism Program without being referred to further (specialized) treatment. Note that all government-funded correctional treatment programs in The Netherlands are only implemented after being accredited by the *Judicial Behavioral Intervention Accreditation Committee*, installed by the Dutch Ministry of Justice and Safety in 2005.[2] This committee (modeled after the British accreditation panel; see Maguire, Grubin, Losel & Raynor, 2010), assesses the potential effectiveness of behavioral interventions based on criteria derived from the RNR-model and *What Works* literature.

Participation in the Prevention of Recidivism Program is voluntary. However, detainees who participate in the program are eligible for placement in prison facilities with a lower security level where they are granted more freedom and are entitled to go on leave. They also qualify for phased re-entry, which means they are gradually granted more freedom until the moment of (early) release. Detainees are required to spend a minimum of one-third of their prison sentence in a fully guarded facility; the remainder of their sentence can be served in a facility with a lower security level (Dutch Prison Service & Dutch Probation Organizations, 2007; Van der Linden, 2004). Detainees who decline participation will have to spend the remainder of their detention period in a fully guarded facility where they are not allowed furlough and are not entitled to phased re-entry (Dutch Prison Service & Dutch Probation Organizations, 2007).

Each year, around five thousand Dutch inmates are eligible for participation in the program (Bosma, Kunst & Nieuwbeerta, 2013). As shown in chapter 4, in which treatment participation in the Prevention of Recidivism Program was studied, non-participation rates were shown to be around forty percent. Program-completion was however not studied.

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2 Note that the *Judicial Behavioral Intervention Accreditation Committee* was replaced by the *accreditation committee interventions* in 2015 (Parliamentary Papers, 2014/15).

Prison-based treatment (non-)completion

Program non-completion is a major problem in correctional rehabilitation practices (see e.g. Brocato & Wagner, 2008; Hollin et al., 2002; McMurran & Theodosi, 2007; Nielsen & Scarpitti, 2002; Wormith & Olver, 2002). In a recent meta-analysis on offender treatment attrition, dropout rates between 27.1 percent (general offender programs) and 37.8 percent (specific offender programs) were documented (Olver, Stockdale & Wormith, 2011).

Treatment non-completion in correctional programs is of great concern for several reasons. First, an offender's risk of recidivism cannot be adequately targeted if detainees fail to complete treatment programs aimed at helping them desist from future criminal behavior. Second, if participants dropout halfway through the program, expensive treatment places will be wasted. This is particularly problematic if other potential participants remain untreated because they could not enter the program due to a limited number of places and/or funding (Polaschek, 2010). Third, previous studies suggest that offenders who do not complete treatment programs are often the ones most in need of correctional treatment (Nunes & Cortoni, 2006a; Polaschek, 2010; Wormith & Olver, 2002). Moreover, reoffending rates appear to be higher for offenders who do not complete treatment than for those who do not enter treatment at all, even despite similarity in criminal propensity (McMurran & Theodosi, 2007). And fourth and final, the selectivity of non-completion forms a problem for assessing the effectiveness of rehabilitation programs. When selective non-completion is not adequately taken into account, effectiveness of treatment programs may be overestimated in effect studies. Knowledge on determinants of treatment completion is therefore important when assessing a treatment program's effectiveness (see also Nunes & Cortoni, 2006a; Polaschek, 2010; Wormith & Olver, 2002).

Since non-completion rates in correctional programs appear to be substantial and are possibly selective, and because completion of prison-based rehabilitation treatment programs is of great societal importance, this study focused on studying the determinants of treatment (non-) completion in the Dutch Prevention of Recidivism Program.

6.2 Theoretical framework

Taking part in a correctional treatment program means an offender has to attend sessions, obey imposed rules and restrictions, disclose personal thoughts and feelings, and finally alter their problem behavior. This requires a certain amount of *motivation* from the offender (Drieschner & Verschuur, 2010). Literature suggests that successful engagement in correctional rehabilitation programs may be best explained by focusing on an offender's willingness (or motivation), and suitability to participate in treatment (see e.g. Howells & Day, 2003; Ward, Day, Howells & Birgden, 2004; Williamson, Day & Howells, 2003), i.e. *treatment readiness*. Additionally, studies suggest that predictors of treatment non-completion may be similar to factors that are

believed to predict recidivism (Chamberlain, 2012; Polaschek, 2010; Olver, Stockdale & Wormith, 2011; Wormith & Olver, 2002), i.e. *risk factors*, such as social achievement and family factors (Gendreau, Little & Goggin, 1996). The relationship between treatment readiness and treatment completion and risk factors and treatment completion will now be further elaborated on.

Treatment readiness

As abovementioned, at present, leading scholars suggest that treatment readiness is related to program completion. The supposed relation between treatment readiness and treatment (non-)completion has been theorized in various ways. Because of the alleged significance of the concept, and the fact that the concept of treatment readiness is not the same as some of the more common approaches to treatment engagement, such as readiness to change, or motivation, and we therefore enter somewhat uncharted territory, we consider it to be vital to first go over some of the more traditional approaches.

The dominant theoretical approach to understanding readiness to change (Povey et al., 1999; Zemore & Ajzen, 1014) is perhaps the Transtheoretical Stages of Change model (Prochaska & DiClemente, 1984); a model that has been widely applied in the field of various health-related and addictive behaviors such as smoking, eating disorders, drug and alcohol abuse, mental health and also offender rehabilitation (Casey, Day & Howells, 2005). The Stages of Change model asserts that change does not occur abruptly but is a process that is characterized by a prescribed pattern of events. It describes behavioral change as a five-stage model; pre-contemplation (unawareness of a problem and the need to change), contemplation (weighting the pros and cons for change), preparation (when the pros outweigh the cons), action (in which efforts are made to change behavior) and maintenance (relapse prevention, see Marlatt & Gordon, 1985). Each stage must be attained in order to move on to the next (for further reading regarding the five stage model (see e.g. Levy, 1997; Prochaska & DiClemente, 1984; Tucker, Donovan & Marlatt, 1999). In line with the model, treatment non-completion may occur when offenders who took part in treatment, did not yet attain the action stage; the stage of change needed to be engaged in treatment.

Some major concerns have however been emphasized concerning the Stages of Change model. First, it is questioned whether or not decision making and motivational processes occur in a series of identifiable stages of change (e.g. Bandura, 1997; Kraft, Sutton & Reynolds, 1999; Littell & Girvin, 2002; Sutton, 2001). Second, the suitability of the model for the use in offender rehabilitation practices has been debated. This is especially relevant in custodial settings, where treatment may not be voluntary and can influence sentencing, parole and/or early release decisions (Casey, Day & Howells, 2005). Several models were therefore proposed that overcome such concerns, such as the theory of Planned Behavior (Ajzen, 1988; 1991), and Multifactor Offender Readiness Model (Ward, Day, Howells & Birgden, 2004).

Existing evidence has shown the value of the Theory of Planned Behavior (Ajzen, 1988; 1991) in modeling treatment completion. In short; humans plan to engage in an action (in this case a treatment program), in which they can follow through, or not follow through. In social and health psychology this function of human behavior is often explained by referring to the Theory of Planned Behavior, which asserts that the decision to engage in any type of behavior is determined by the *intention* to engage in behavior. This intention is in turn determined by three factors; the attitude towards performing that behavior, the perceived social pressure to perform or not perform that behavior (the subjective norm), and the degree of perceived behavioral control. If a person has a positive attitude towards behavior, feels that others have positive attitudes towards that behavior (and cares about what others think), and perceives the task at hand as achievable, the likelihood of that behavior occurring is believed to increase. The Theory of Planned Behavior has been successfully applied to a wide range of (health related) behaviors, such as engagement in exercise programs (see Hagger, Chatzisarantis & Biddle, 2002), medication regimes (see Conner, Black & Stratton, 1998), and substance abuse treatment (see Zemore & Kaskutas, 2009).

The theory of planned behavior essentially asserts that behavior achievement is a function of one's *intention* (or motivation, produced by the attitude towards behavior and perceived social pressure), and one's *ability* to persist in behavior (reflected by the perceived behavior control; Ajzen, 1985). A similar reasoning is captured in the *Multifactor Offender Readiness Model* [MORM] (Ward et al, 2004). According to the MORM, behavioral change can occur when an offender is treatment ready (Casey, Day, & Howells, 2005; McMurran & Ward, 2010; Ward et al, 2004); which can be described as "the presence of characteristics within the client and/or therapeutic situation which is likely to endorse therapeutic engagement and, therefore, behavioral change" (Howells & Day, 2003). Offenders are ready for treatment if they are motivated, are able to respond to treatment, find treatment meaningful and have the capacities to successfully enter the program (Howells & Day, 2002; 2003; McMurran & Ward, 2010; Ward et al., 2004). According to the MORM, an offender's treatment readiness is determined by a number of internal (personal) characteristics (such as believes, emotions and experiences, goals, skills and capacities) and external (contextual) factors (such as treatment characteristics, staff characteristics and support from family and friends), which if present allow offenders to effectively participate in and benefit from correctional treatment programs (Ward et al., 2004). These internal and external factors are believed to determine whether an offender will engage in and consequently benefit from correctional treatment programs (McMurran & Ward, 2010; Ward et al., 2004).

The aforementioned models all, though perhaps in a different manner, explain the mechanisms through which motivation relates to (correctional) treatment completion. Based on the above described theoretical models it can therefore be hypothesized that offenders with less treatment readiness will be less likely complete treatment programs that aim to help them desist from criminal behavior.

Risk factors

In addition to treatment readiness, it has been proposed that non-completion may be determined by *risk factors* (Chamberlain, 2012; Polaschek, 2010; Olver, Stockdale & Wormith, 2011; Wormith & Olver, 2002). This can be explained by the General Personality and Cognitive Social Learning Perspective of Criminal Behavior (Andrews & Bonta, 2006), a model often used to ground the previously mentioned RNR-model (Andrews, Bonta & Hoge, 1990). According to this theory, criminal behavior is learned within a social context, through multifaceted interactions between personality-; cognitive-; emotional-; and biological factors, and is governed by the expected and actual costs and rewards of criminal behavior. These costs and rewards can be delivered by others (partners, family members, friends, colleagues), can stem from within (such as happiness or shame), or can be provided by the (criminal) behavior itself (an adrenaline rush when committing an armed robbery; see Andrews & Bonta, 1998; 2006; Bonta, 2002; Bonta & Andrews, 2007). Behavior for which a reward is expected is likely to occur, while behavior that is not expected to be rewarded (or is expected to be punished), is not likely to occur. The model suggests that risk factors are characteristics and circumstances of people that influence the likelihood that pro-social and/or antisocial behavior are rewarded (Andrews, Bonta & Wormith, 2011). To exemplify this; if a person is involved in an antisocial peer-group, criminal behavior is likely to be rewarded. In accordance with the General Personality and Cognitive Social Learning Perspective of Criminal Behavior, a correctional treatment program should be directed at reducing or removing these risk factors. The described mechanism, clarifying how risk factors influence (future) criminal behavior may however also be marshalled to explain how a similar cost- and benefit analyses influences an offenders decision to continue to take part in treatment programs that aim to help them desist from future criminal behavior (Wormith & Olver, 2002). To exemplify this; an offender who was allocated to substance abuse treatment, may – influenced by risk factors such as addiction, unemployment, and financial debt – not see the benefits of successfully finishing a treatment program aimed at coping with addictive behavior, but instead will anticipate numerous difficulties and perhaps even failure. Consequently, based on the General Personality and Cognitive Social Learning Perspective of Criminal Behavior, it is expected that offenders with a more severe risk and need assessment outcomes, will be less likely to complete treatment aimed at helping them desist from criminal behavior.

6.3 Previous research

A recent systematic review of the literature suggests that 25 studies have investigated determinants of treatment completion in prison-based treatment programs in the past decades (1990 – 2010; Olver, Stockdale & Wormith, 2011). These studies confirm that offenders with less treatment

readiness are less likely to complete correctional programs performed within the walls of prison (Nunes & Cortoni, 2006a; Nunes & Cortoni, 2006b; Ogloff, Wong & Greenwood, 1990; Pelissier, 2007; Wormith & Olver, 2002).

Additionally, previous work additionally suggests that risk factors for reoffending are related to treatment engagement. For example, it has been shown that offenders with a higher overall risk for reoffending are less likely to complete correctional treatment programs (Berman, 2005; Nunes & Cortoni, 2006a; Nunes & Cortoni, 2006b; Nunes & Cortoni, 2008; Olver & Wong, 2009; Wormith & Olver, 2002). Similarly, having more (severe) criminogenic risk factors decreases one's chances of completing a correctional treatment program (Nunes & Cortoni, 2006b; Olver & Wong, 2009; Walters, 2004). In more detail; it has been shown that offenders with more extensive criminal histories and more severe current offences (i.e. offences for which they are detained) are less likely to complete correctional treatment programs (Berman, 2005; Geer, Becker, Gray & Krauss, 2001; McGrath, Cumming, Livingston & Hoke, 2003; Moore, Bergman & Knox, 1999; Nunes & Cortoni, 2008; Seager, Jellicoe & Dhaliwal, 2004). To exemplify this, a study conducted by Geer and others (2001), examining factors that increase the likelihood that sex-offenders complete a correctional sex-offender treatment program, showed that the number of previous incarcerations lowered the odds of completing the treatment program by almost thirty percent (Geer et al., 2001). Factors relating to offenders' work history and education level have also been found to impact upon engagement in correctional treatment programs (Geer, et al., 2001; Olver & Wong, 2009; Pelissier, 2007; Seto & Barbaree, 1999; Shaw, Herkov & Greer, 1995; Wormith & Olver, 2002). For example, a study by Palissier (2007) showed that the number of educational years was associated with treatment retention (Palissier, 2007). The influence of social risk factors has also been addressed in earlier studies. Among other things, previous research has pointed out that single marital status and substance abuse was associated with lower completion rates (Moore, Bergman & Knox, 1999; Olver & Wong, 2009; Shaw, Herkov & Greer, 1995). Finally, more (severe) psychological risk factors have also been linked to lower completion rates (McMurran, Huband & Duggan, 2008; Moore, Bergman & Knox, 1999; Nunes & Cortoni, 2006b; Ogloff, Wong & Greenwood, 1990; Olver & Wong, 2009; Polaschek, 2010; Shine, 2001). This can be illustrated by referring to a study conducted by McMurran, Huband and Duggan (2008), which examined indicators of treatment completion amongst detained offenders. The authors found that more rational and less impulsive offenders were more likely to complete their treatment programs (McMurran, Huband & Duggan, 2008).

Despite the fact that the number of studies that examined determinants of prison-based treatment completion is considerable, the vast majority of available studies suffer from various limitations. In particular, many of them were not theory driven, studied relatively small numbers of respondents, focused on specific types of offender (e.g. sex-offenders or batterers), and used sub-optimal analytical strategies (i.e. predominantly univariate instead

of multivariate analyses). The current study aims to address several of these shortcomings. Additionally, all studies were conducted in Northern American samples. To assess if the results of these studies also hold true in different legal and social circumstances, replication is needed.

6.4 The current study

Given the aforementioned, the purpose of the current study was to examine treatment completion among correctional rehabilitation program candidates in The Netherlands. Three research questions were addressed: (1) how many offenders completed the Prevention of Recidivism Program? (2) What were their characteristics? And (3) which factors determined program completion? Based on theoretical and empirical considerations, it was expected that offenders with less treatment readiness would be less likely to complete prison-based treatment programs. Additionally it was expected that offenders with more (severe) risk factors would be less likely to complete prison-based treatment programs. To answer the research question proposed, data were used from the Prison Project: a unique longitudinal research project about the consequences of incarceration in The Netherlands that included a population-based research sample.

6.5 Methods

Sample and Procedure

To address the proposed research questions, data were analyzed from a sample of 541 male offenders who were candidate for the Prevention of Recidivism Program in The Netherlands and were included in the population-based research sample of the Prison Project. Participants in the Prison Project included the total inflow of male detainees who had entered the Dutch penitentiary system between October 2010 and March 2011, were between the age of 18 and 65 and who were born in The Netherlands (Dirkzwager et al., 2016). The use of a research sample of detainees who entered prison in pre-trial detention is favorable, because previous research suggests that incarceration times for offenders who have entered prison in pre-trial detention are longer compared to offenders who enter prison on other legal grounds (Linckens & de Looff, 2015). Considering the relatively short prison sentences imposed in The Netherlands (Kalidien & Zuiderwijk van Eijk, 2010; Linckens & De Looff, 2015), and the length of stay criteria set for entry in the Prevention of Recidivism Program, offenders who entered detention on other grounds than pre-trial detention are less likely to qualify for program entry (and would consequently not represent an optimal research population). Because some offenders were sentenced to fairly long prison sentences, they had not yet left prison at the time of data collection. These offenders were still taking part in treatment, and could therefore still complete, or drop out of treat-

ment in the future. Therefore, these offenders (n = 33) were removed from the current study's research sample, which leaves a final research sample of 508 offenders.

Several sources of information on the persons included in the sample were gathered to answer the research question proposed. The *Dutch Custodial Institutions Agency* provided registration data on all persons in the sample, including data on background characteristics (Prison Registration System) and in depth information regarding rehabilitation trajectories (Prevention of Recidivism Registration System). Finally, risk assessment data on the offenders included in the sample were made available by the *Dutch Probation Service*. This database contained risk assessment data on 480 (94.5%) of the total sample of 508 offenders.

Dependent variable: program completion

The dependent variable included in the current study was program completion (1 = yes; 0 = no). To determine program completion, the *Prevention of Recidivism Registration System* was consulted. This administrative database is accessible and used in every prison in The Netherlands and provides exact information regarding the status of an offender's program participation. Information could therefore easily be retrieved. Additionally, the registration system also provides information regarding reasons for non-completion. Consequently, in line with Chapter 4, it could be examined if an offender had dropped-out of the program because of circumstances beyond his control (for example, if an offender was suddenly released, or if a prison was confronted with staff-shortages and therefore had to terminate programs), which in light of this study is referred to as *non-completion for organizational reasons*, or if an offender dropped-out of the program at his own request (for example, because of a lack of motivation), which is named *non-completion – own decision.*

Furthermore, the administrative database provides information on an offender's treatment program, and the specific criminogenic-need focused modules that an individual offender was referred to. As shown in the previous chapter, about half of our sample (n = 272, 50.3%) was not referred to a treatment module, while 126 offenders (23.4%) were referred to cognitive skill training, 61 offenders (11.3%) to lifestyle training, and 82 offenders (15.2%) to both cognitive skill and lifestyle training. Examination of the Prevention of Recidivism Registration System, however, learned that in some cases, treatment modules were not completed (or had not been started at all). And similar to non-completion in the overarching program, treatment modules were in some cases non-completed because of circumstances, such as a lack of treatment places or sudden termination of a prison sentence, or because an offender actually wanted to dropout because of a lack of motivation to engage and finish.

To make the above mentioned fully transparent, a cross table was created in which Prevention of Recidivism Program completion status and treatment module completion status were displayed (see Table A1 in Appendix A). As shown in Table A1, there are cases where the Prevention of Recidi-

vism Program was considered successfully completed, in which offenders did not complete the treatment module they were allocated to. For instance, 6 offenders did not complete cognitive skill training (own decision), but were considered successful program Prevention of Recidivism completers. This was also the case for offenders who did not complete cognitive skill training because of organizational circumstances (n = 32), they were still considered program completers by the registration system. Because the current study aims to assess which variables determine program completion, we believe that offenders that did not complete the program (for both organizational reasons and as a result of their own decision), or did not complete the most significant part of their Prevention of Recidivism Program (treatment modules that target their criminogenic needs, again for both organizational reasons and as a result of their own decision), should not be considered program completers. Therefore, based on both overall program status and treatment module status, a new program completion variable was created. Program completion status was considered leading, however, in cases were offenders did not complete the criminogenic need-specific treatment module they were referred to, program completion was recoded into program non-completion. Again, a distinction was made between offenders that did not complete their treatment module because of organizational circumstances and offenders that did not complete treatment as a result of their decision. Following these guidelines, a second cross table was created in which Prevention of Recidivism Program completion status and criminogenic need-specific treatment module status were displayed (see Table A2 in Appendix A). This shows a much more cohesive representation of program completion, in which offenders that were removed from either the overarching Prevention of Recidivism Program or the treatment module(s) incorporated in their re-integration plan were both considered program non-completers.

Independent variables

Treatment readiness and risk for reoffending were assessed by using scores on the Dutch-language Recidivism Assessment Scales (RISc). The RISc, modeled after the British Offender Assessment System (OASys; Howard, Clark & Garnham, 2003), is a standardized risk assessment instrument based on the RNR principles that consists of 12 scored subdivisions, each relating to a different risk domain: (1) offending history, (2) current offence and pattern of 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. Each RISc item is rated on a three-point scale (0 = *no problems*, 1 = *some problems*, and 2 = *significant problems*). The scores on the first two domains are combined into one score concerning past and current offences. The overall risk level and criminogenic needs scores are calculated by summing and weighting item scores within each section, with higher scores corresponding to higher risk and need levels (Adviesbureau

van Montfoort & Reclassering Nederland, 2004; Bosker, 2009; Van der Knaap, Leenarts, Born & Oosterveld, 2012). Research has shown that the intraclass-reliability, internal consistency and predictive validity of the RISc are adequate (Van der Knaap, Leenarts & Nijssen, 2007; Van der Knaap & Alberda, 2009). In this study treatment readiness was used, which was estimated by an experienced probation service worker who, by means of a personal interview, determines an offender's motivation to change, and his willingness to participate in treatment. Ready for treatment was coded as 1 and not ready for treatment was coded as 0. Weighted scores on the twelve risk domains were also included.

Covariates

Background characteristics included age, ethnic background (native vs. non-native) and current offence (violent, property, damage, drug-related and other). Age was calculated from the prison registration systems by date of birth and the date of their prison entry. Ethnicity was obtained from municipal data, and if missing was drawn from the risk assessment database (in line with Statistics Netherlands a person is defined as having a non-native background if at least one of his/her parents was born abroad). Additionally, the prison registration system was used to identify a detainee's current offence, which was coded as violent (violent offences) and non-violent (property, damage, drug related and other offences). Criminogenic need-specific treatment modules included in an offender's treatment plan can differ from one detainee to another. Therefore, using the registration system, a detainee's individual *treatment content* (criminogenic need-specific behavioral interventions) was also recorded and added as a control variable.

Statistical analyses

In order to study program completion, our sample of treatment participants was divided into three groups: (1) detainees who had completed treatment (program completion); (2) detainees did not complete treatment for organizational reasons (non-completion for organizational reasons); (3) detainees who did not complete treatment based on their own decision (non-completion – own decision). Next, bivariate descriptive analyses were used to describe the characteristics of the research population and to examine the relation between these characteristics and program completion. A multinomial logistic regression analysis was then conducted to determine if treatment readiness and risk factors served as predictors of program completion (program completion was coded as 1, $n = 420$), versus both types of program non-completion. Because of our modest sample size, and relatively large set of independent variables, a series of univariate multinomial logistic regression analyses was first performed to determine Wald and Odds Ratio statistics, after which, based on their p value, a selective set of 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.

The independent variables that were included were covariates (background characteristics age, ethnicity and type of offence, and treatment content), treatment readiness, and risk scores (offending history, current offence 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).

Theoretically, expectations only focused at treatment non-completion. The fact that non-completion could be divided in offender instigated non-completion, and non-completion for organizational circumstances was not foreseen (and was also not anticipated on based on previous research conducted), but was a consequence of prison-based rehabilitation delivery in The Netherlands. Nonetheless, since we do not with certainty know that personal characteristics are unrelated to organizational non-completion (for example, because the prison service puts less effort in providing treatment for offenders who are less willing to take part, of who are considered particularly high risk, and consequently excludes these offenders based on organizational justifications) we decided to not only test our independent variables on offender who did not complete as a result of their own choice (i.e. the hypothesized relations), but also on offenders who did not complete for organizational reasons.

6.6 Results

Table 1 summarizes relevant sample characteristics for program completers (group 1), consisting of 369 persons (72.6%); program non-completers who did not finish because of organizational circumstances (group 2), consisting of 96 offenders (18.9%); and program non-completers who did not finish based on their own decision (group 3), consisting of 43 persons (8.5%),

With respect to treatment type allocated to, group differences were reported between program completers and both types of non-completers, as well as between non-completers due to organizational circumstances and offender instigated non-completers. In general, program-completers, compared to non-completers were more than half of all cases referred to a standard program with no criminogenic need-specific treatment modules (59.3%), compared to non-completers due to circumstances (14.6%) and non-completers due to dropout (37.2%). Both groups of non-completers were more often allocated to cognitive skill training (40.6%, 34.9%), or both cognitive skill- and lifestyle training (26.0%, 18.6%), compared to completers (19.0%, 11.4% respectively). Lastly, non-completers due to organizational circumstances were more often referred to lifestyle training (18.8%), compared to completers (10.3%), and non-completers that had dropped out (9.3%).

Table 1. Group characteristics program completers and program non-completers for organizational reasons and own decision (n=508)

	1. Program completion (*n*=369)	2. Program non-completion: organizational reasons (*n*=96)	2. Program non-completion: own decision (*n*=43)	Total (*N*=508)	
	M(SD)/%	*M(SD)*/%	*M(SD)*/%	*M(SD)*/%	Sig.
Age	29.6 (10.3)	30.5 (10.1)	27.4 (10.3)	29.6 (10.3)	n.s.
Ethnicity (native vs. non-native or unknown)	59.3	56.3	46.5	57.5	n.s.
Type of offence (violent vs. non-violent)	60.2	59.4	65.1	60.4	n.s.
Treatment type allocated to					*** 1/2 1/3 2/3
None	59.3	14.6	37.2	49.0	
Cognitive skill training	19.0	40.6	34.9	24.4	
Lifestyle training	10.3	18.8	9.3	11.8	
Cognitive skill and lifestyle training	11.4	26.0	18.6	14.8	
Treatment readiness (ready vs. not or unknown)	61.2	61.5	48.8	60.2	n.s.
Risk factors					
Offending history & current offence (0-50)	18.1 (13.0)	19.8 (11.7)	22.5 (11.7)	18.8 (12.7)	n.s.
Accommodation (0-12)	4.0 (4.2)	4.4 (4.4)	4.0 (3.8)	4.1 (4.2)	n.s.
Education, work & training (0-20)	9.0 (6.7)	10.0 (6.3)	11.1 (6.4)	9.4 (6.6)	n.s.
Financial management & income (0-12)	5.2 (3.9)	4.7 (3.6)	5.1 (3.5)	5.1 (3.8)	n.s.
Relationships with partner & relatives (0-6)	2.6 (1.7)	2.8 (1.9)	2.7 (1.4)	2.6 (1.7)	n.s.
Relationships with friends & acq. (0-15)	6.4 (4.4)	6.3 (4.1)	7.5 (4.5)	6.5 (4.3)	n.s.
Drug misuse (0-15)	5.6 (5.3)	6.0 (5.1)	6.7 (4.8)	5.8 (5.2)	n.s.
Alcohol misuse (0-5)	1.6 (1.9)	1.8 (1.9)	1.5 (1.8)	1.6 (1.9)	n.s.
Emotional well-being (0-6)	2.2 (1.7)	2.2 (1.7)	2.3 (1.3)	2.2 (1.7)	n.s.
Thinking & behavior (0-12)	7.6 (3.2)	8.6 (2.4)	9.3 (2.3)	7.9 (3.0)	*** 1/2 1/3
Attitudes & orientation (0-15)	6.1 (4.5)	7.0 (4.8)	8.6 (4.5)	6.5 (4.6)	** 1/3

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

As shown, group differences were reported with regards to the risk scales thinking and behavior, and attitudes and orientation. Also, the treatment modules completed differed between our treatment groups. Concerning the risk scale thinking and behavior, post-hoc analyses showed that program completers had reported lower scores (M=7.6), indicating less (severe) problems, compared to both groups of non-completes (M=8.6 and 9.3). With regards to the risk domain attitudes and orientation, results indicated that offenders who were grouped under offender-instigated dropout, reported more (severe) problems (M=8.6), compared to program completers (M=6.1). However, although group differences on two risk domains were reported, it must be mentioned that these are differences are relatively small. To exemplify this; concerning the scale attitudes and orientation (scores ranging from 0 to 15), results show that program completers have only slightly lower average scores (M=6.1) than offenders who dropped-out (M=8.6).

With respect to background characteristics and treatment readiness, no differences were reported between the three groups studied.

Table 2 shows the results from a series of univariate analysis of each variable that, based on theoretical and empirical considerations, was believed related to treatment completion. As mentioned, variables having a significant univariate test, as evidenced by a p value cutoff point of 0.15 (see Hosmer & Lemeshow, 2000), were included in the multivariate model explaining treatment completion. Based on the results presented in Table 2, ethnicity, treatment readiness, and the risk domains offending history and current offence, education, work and training, relationships with friends and acquaintances, thinking and behavior, attitudes and orientation, and treatment module referred to, were included in the multinomial logistic regression model explaining program completion.

Table 2. Bivariate Odds ratios independent variables on program completion

	Completion (ref; n=369) VS non-completion: organizational reasons (n=96)			Completion (ref; n=369) VS non-completion: own decision (n=43)			
	OR	CI	*p*	OR	CI	*p*	
Age	1.01	[0.99 – 1.03]	.450	0.98	[0.94 – 1.01]	.167	
Ethnicity	1.14	[0.72 – 1.79]	.583	1.68	[0.89 – 3.17]	.109	*
Type of offence	1.03	[0.65 – 1.63]	.888	0.81	[0.42 – 1.57]	.530	
Treatment type allocated to							
None	*Ref.*	*Ref.*	*Ref.*	*Ref.*	*Ref.*	*Ref.*	
Cognitive skill training	8.72	[4.47 – 16.99]	.000	2.93	[1.38 – 6.24]	.005	*
Lifestyle training	7.41	[3.40 – 16.14]	.000	1.44	[0.46 – 4.54]	.533	*
Cognitive skill and lifestyle training	9.31	[4.47 – 19.38]	.000	2.61	[1.05 – 6.48]	.039	*
Treatment readiness	0.99	[0.63 – 1.57]	.970	1.66	[0.88 – 3.12]	.119	*
Risk factors							
Offending history and current offence	1.01	[0.99 – 1.03]	.256	1.03	[1.00 – 1.05]	.033	*
Accommodation	1.03	[0.97 – 1.08]	.359	1.01	[0.93 – 1.09]	.897	
Education, work and training	1.02	[0.99 – 1.06]	.214	1.05	[1.00 – 1.10]	.060	*
Financial management and income	0.97	[0.91 – 1.03]	.342	1.00	[0.91 – 1.08]	.918	
Relationships with partner and relatives	1.09	[0.96 – 1.25]	.194	1.05	[0.87 – 1.26]	.643	
Relationships with friends and acq.	1.00	[0.95 – 1.05]	.928	1.07	[0.99 – 1.15]	.102	*
Drug misuse	1.01	[0.97 – 1.06]	.542	1.04	[0.98 – 1.11]	.213	
Alcohol misuse	1.07	[0.95 – 1.21]	.258	0.97	[0.82 – 1.16]	.746	
Emotional well-being	0.99	[0.86 – 1.13]	.833	1.02	[0.84 – 1.24]	.823	
Thinking and behavior	1.12	[1.03 – 1.22]	.007	1.27	[1.10 – 1.47]	.001	*
Attitudes and orientation	1.05	[0.99 – 1.10]	.087	1.13	[1.05 – 1.21]	.001	*

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

The results of a multinomial regression analysis, testing the influence of ethnicity, treatment readiness, five risk domains and treatment type referred to, which were assigned by a set of univariate analyses, on program completion, are presented in Table 3.

First, it was shown that the treatment type an offender was allocated to appear to have influenced treatment completion rates. Offenders that were referred to cognitive skill training were shown more likely to have not completed treatment due to organizational circumstances (OR=9.76), as well as non-completion caused by offender-instigated dropout (OR=2.42). Offenders who were referred to lifestyle training, and who were referred to cognitive skill and lifestyle training were also shown more likely to be among the group of program non-completers do to circumstances (OR=6.67, and OR=8.73), than among the group of program completers. This effect is perhaps somewhat self-evident; it is easier to complete a program without any

content, then to complete a program for which behavioral programs need to be attended.[3]

Table 3. Multinomial regression model on program completion

	Completion (ref; n=369) VS non-completion: organizational reasons (n=96)			Completion (ref; n=369) VS non-completion: own decision (n=43)		
	OR	CI	Sig.	OR	CI	Sig.
Ethnicity	1.05	[0.72 – 1.76]	n.s.	1.86	[0.94 – 3.69]	n.s.
Treatment type allocated to						
None	*Ref.*	*Ref.*	*Ref.*	*Ref.*	*Ref.*	*Ref.*
Cognitive skill training	9.76	[4.76 – 20.01]	***	2.42	[1.07 – 5.48]	*
Lifestyle training	6.67	[2.94 – 15.15]	***	1.15	[0.35 – 3.71]	n.s.
Cognitive skill and lifestyle training	8.73	[3.99 – 19.11]	***	2.09	[0.81 – 5.38]	n.s.
Treatment readiness	0.94	[0.54 – 1.65]	n.s.	1.36	[0.65- 2.85]	n.s.
Risk factors						
Offending history and current offence	1.00	[0.98 – 1.02]	n.s.	1.01	[0.98 – 1.04]	n.s.
Education, work and training	1.01	[0.97 – 1.06]	n.s.	0.99	[0.94 – 1.06]	n.s.
Relationships with friends and acquaintances	0.92	[0.86 – 1.00]	*	0.97	[0.88 – 1.06]	n.s.
Thinking and behavior	1.05	[0.92 – 1.21]	n.s.	1.16	[0.95 – 1.43]	n.s.
Attitudes and orientation	1.05	[0.97 – 1.14]	n.s.	1.07	[0.96 – 1.19]	n.s.

Note: Overall model Wald χ^2 (89.971, 14), p <.001, Cox and Snell R^2 = .171, Nagelkerke R^2 = .218.
* p <.05 ** p < .01 *** p < .001

Next, it appears that our independent variables included in the multivariate model explaining program completion, treatment readiness and risk factors, did not appear to be related to program completion. Only one variable showed significantly associated to completion: Program completion versus program non-completion due to circumstances was significantly related with the risk scale relationships with friends and acquaintances: Offenders that had reported higher scores on this risk assessment scale were less often among those that did not complete for organizational reasons, then among

3 Note that the fact that some offenders were classified as program non-completers because they did not complete the criminogenic need-specific program they were allocated to (while the Prevention of Recidivism Program registration system had classified them as program-completers, a procedure which was described extensively on page 135) could have potentially caused offenders assigned to a treatment module to have a higher odds of being among the group of program non-completers. To examine if this was the case, the conducted regression analysis was repeated using the original program completion-status. The results of this additional analysis were comparable to the one presented in Table 3, meaning that the results were not an artifact of our decision to re-classify some offenders as program non-completers.

offenders that completed treatment (OR=0.92). Though statistically significant, we do not consider this relationship relevant, since we cannot think of any logical mechanism that would explain a relationship between problems relating to having (and maintaining) healthy, pro-social relationships with ones friends and acquaintances, and the (externally forced) drop-out for organizational circumstances.

The variables included in the model explained little model pseudo-variation as evidenced by the Cox and Snell pseudo-R^2 of .171 and Nagelkerke pseudo-R^2 of .218. These results seem to indicate that risk factors and treatment readiness did not relate to treatment (non-) completion. Rather, treatment (non-) completion, appeared to be influenced by the type of treatment program that had to be carried out: if this program was standard, odds of program completion increased, while a non-standard program, in which treatment modules had to be carried out, increased the chances of not completing treatment.

6.7 Discussion

The purpose of the current study was to study program completion among participants in a prison-based rehabilitation program implemented nationwide in The Netherlands: the Prevention of Recidivism Program. Three research questions were addressed: (1) how many offenders completed the Prevention of Recidivism Program? (2) What were their characteristics? And (3) which factors determined program completion? To answer the research questions raised, population-based data were used from a large-scale, longitudinal research project, studying the effect of imprisonment on the life of detainees and their families in The Netherlands (the Prison Project).

Program completion

First, it was shown in this study that offender-instigated non-completion rates were limited, certainly when comparing these to non-completion rates found in previous studies (see Brocato & Wagner, 2008; Hollin et al., 2002; McMurran & Theodosi, 2007; Nielsen & Scarpitti, 2002; Wormith & Olver, 2002). However, non-completion due to various (organizational) circumstances was shown to be substantial. This type of non-completion is perhaps less favorable than offender-instigated dropout, because it is a waste of treatment potential among well-willing offenders in need of treatment. With respects to the characteristics of program completers and both groups of non-completers, it was concluded that groups were fairly comparable on most background variables. The three groups did however differ in the treatment type they were allocated to. Overall it was shown that offenders who completed treatment more often had been referred to a standard program, were those who did not complete for organizational reasons more often were allocated to some type of criminogenic need specific program.

In general it appeared that those were successful in completing, had less to do, in comparison to those who had been unsuccessful. Additionally, the groups differed on two risk assessment domains (thinking and behavior, and attitudes and orientation), in which program completers had reported s lower scores.

To study the factors that determined program completion, a theoretical model was proposed in which, based on theoretical and empirical considerations, treatment program completion was predicted by two (domains of) variables, namely *risk factors* and *treatment readiness*. Again, our independent variables may be unrelated to organizational non-completion, but since we cannot be sure, we tested the influence of our independent variables on both types of non-completion. Results have shown that treatment readiness did not, contrary to the hypothesis, prove to be related to program completion. Offenders who were ready for treatment did not show a higher likelihood of completing their program (versus either type of non-completion) compared to offenders who were not classified as treatment ready. Regarding risk factors, it was hypothesized that a higher score on risk domains would decrease chances of completing a correctional treatment program. Based on results, however, it has to be concluded that the current study does not provide evidence to support this statement. Only one risk domain correlated with treatment completion (relationships with friends and acquaintances), but we believed this relation to be random and irrelevant. There was one factor that did appear salient in predicting treatment completion: the type of treatment program an offender was referred to. Offenders that were referred to a program that contained criminogenic need-specific treatment modules were more often among those that did not complete treatment. This was especially the case in non-completion that was caused by organizational circumstances. In other words; if an offender had little to do (i.e. no criminogenic need-specific treatment module to attend) the likelihood of program completion increased, and vice versa.

In conclusion, the current study did not provide any evidence concerning the hypothesized relationship between treatment readiness and risk factors, and program completion. These findings are inconsistent with premises made based on the Multifactor Offender Readiness Model [MORM] (Ward et al., 2004), which indicate that treatment readiness is an important predictor correctional treatment program engagement. Outcomes were also inconsistent with result from previous studies, concluding that treatment readiness was related to treatment completion (Nunes & Cortoni, 2006a; Nunes & Cortoni, 2006b; Ogloff, Wong & Greenwood, 1990; Pelissier, 2007; Wormith & Olver, 2002). The results also did not provide any evidence concerning the relationship between an offenders risk assessment outcomes and program completion. This was not in line with expectations based on the General Personality and Cognitive Social Learning Perspective of Criminal Behavior (Andrews & Bonta, 2006), and neither with outcomes of previous studies, which found that risk factors were significantly correlated with program completion (see e.g. Olver, Stockdale & Wormith, 2011).

This suggests that our theoretical framework did not quite suit our data, which would indicate that treatment readiness and risk factors are not related to treatment completion. It could however also been caused by suboptimal research methods and/or data, such as a modest research sample, and (in some cases rather small) number of observations within groups, or an inadequate measure of treatment readiness (the clinical assessment of a probation worker, instead of a validated instrument). Although we tried to be as careful as possible in our analyses, for example by only including a limited number of variables in our multivariate model, we cannot be sure that this could not have influenced the lack in results found. Consequently, this study (being the first to study the determinants of treatment completion in a prison-based treatment program in The Netherlands) cannot with certainty state that treatment readiness and risk factors are unrelated to treatment completion in The Netherlands, meaning that future research is necessary to further examine our hypotheses postulated.

Additionally, based on this study, it was concluded that referrals to criminogenic need-specific treatment modules decreased chances of treatment completion. Although not tested (because data were lacking), perhaps non-completion among offenders with a more elaborate treatment program was caused by the difficulties that arise when treatment modules have to be carried out within the walls of prison. As was shown by a previous study conducted by the Inspectorate of Security and Justice (ISJ), the complex structure of the Prevention of Recidivism Program, and the criminogenic need-specific behavioral modules part of the program, were shown to cause great delays in individual program trajectories (ISJ, 2010). Although the Inspectorate of Security and Justice merely concluded that Prevention of Recidivism Program-trajectories were hampered, and in many cases, delayed by execution problems, it could perhaps also be an explanation for (organizational) program non-completion, as shown in the current study. Higher non-completion rates among offenders who were allocated to a broader treatment program are problematic, because the mere fact that offenders are referred to such programs, indicate their need for treatment. If offenders considered in greater need for treatment, compared to offenders who were assigned a standard program, are more likely to not complete their program, questions could be raised concerning the impact of non-completion on post-release re-offending among this specific group of offenders.

Limitations

Although the current study certainly contributes to the field of rehabilitation program completion in a prison-based setting; a research area in which studies are sparse, especially compared to studies conducted in a community context. There are some limitations that may have slightly hampered the current studies results.

First of all, although the current study set off with a population-based research sample of 3.981 offenders, due to program non-candidacy (elaborated on in Chapter 3) and non-participation (discussed in Chapter 4), the

current study ended up with a group of program participants that consisted of 541 offenders. Because this study revealed there were two types of non-completion, and because some offenders were removed from the sample because they were serving relatively long prison sentences and were still incarcerated at the moment of data-collection, the treatment groups studied in this chapter were rather small. This is especially true for the non-completers drop-out group, which only consisted of 43 prisoners. On a similar note, potentially caused by the Prevention of Recidivism Program's main inclusion criteria of a prison sentence of at least four months, the (already small) group of program participants also represented a somewhat homogeneous group of high-risk offenders. Both factors may have biased the current study's findings. Second, although out initial sample was large, it only included male detainees who were born in The Netherlands and were put in pre-trial detention, which indicates that the findings cannot be generalized to, for example detainees from other geographic locations, making replication of this study required.

Third, this study used data that were not specifically collected for research purposes. Using registration data has advantages, since a broad range of data was available on a large offender population, without respondents actually having to engage in a study (with the option of selective non-response). There are however also pitfalls, as some of the measures included were somewhat inadequate, such as treatment readiness, which was assessed by the clinical judgment of a trained probation officer. A previous study indicated that treatment readiness measured by a validated instrument was shown a better predictor of treatment engagement, than a measure clinically assessed by a trained probation worker (see Bosma, Kunst, Dirkzwager & Nieuwbeerta, 2015). Future studies should therefore use a validated instrument to measure treatment readiness. Lastly, a future study may want to include several contextual factors in the model. Some researchers consider contextual factors a better predictor of treatment engagement than personal characteristics (e.g. Broome, Knight, Hiller & Simpson, 1996). Therefore, in future research, it would be an improvement if background information regarding treatment context was added to study if this related to treatment completion.

Conclusion

Despite these limitations, we consider the results of this study important for correctional rehabilitation practices. Perhaps this study was not able to provide a definite answer to the question whether treatment readiness and risk factors are associated with treatment completion, it did point to two important factors: First, in literature, a distinction is usually made between program completion and program non-completion. Because of a richness of data used in this study, it was uncovered that most offender non-completion in a prison-based rehabilitation program was not caused by offender-instigated dropout, but was rather a result of a subset of organizational and circumstantial factors. This is a serious matter that should be taken into

account in future studies. And second, treatment non-completion (especially the type of non-completion that was caused by organizational circumstances) was greatest among offenders who were referred to a program that included criminogenic need-specific treatment modules. This is problematic, and should certainly be addressed.

Appendix A: Tables

Table A1. Crosstab Prevention of Recidivism Program completion status versus treatment module completion status

		Prevention of Recidivism Program				
		Completion	Non-completion organizational reasons	Non-completion own decision	*Still Incarcerated*	Total
Standard program		219	14	16	23	272
Cognitive skill training	Completion	70	4	3	1	78
	Organizational reasons	32	3	5	-	40
	Own decision	6	-	1	-	7
	Yet to be implemented	-	-	-	1	1
	Total					126
Lifestyle training	Completion	38	2	-	-	40
	Organizational reasons	16	-	1	-	17
	Own decision	3	-	-	-	3
	Yet to be implemented	-	-	-	1	1
	Total					**61**
Both	Completion: both	22	3	2	2	29
	Completion: cognitive skill training; non-completion: lifestyle training	10	3	-	-	13
	Completion: lifestyle training; non-completion: cognitive skill training	10	-	1	-	11
	Non-completion: both, for organizational reasons	19	-	4	-	23
	Non-completion: both, own decision	-	1	-	-	1
	Yet to be implemented	-	-	-	5	5
	Total					**82**
Total		**445**	**30**	**33**	**33**	**541**

Table A2. Crosstab Prevention of Recidivism Program completion status versus treatment module completion status revised

		Prevention of Recidivism Program				
		Completion	Non-completion organizational reasons	Non-completion own decision	*Still Incarcerated*	Total
Standard program		219	14	16	23	272
Cognitive skill training	Completion	70	4	3	1	78
	Organizational reasons	-	35	5	-	40
	Own decision	-	-	7	-	7
	Yet to be implemented	-	-	-	1	1
	Total					**126**
Lifestyle training	Completion	38	2	-	-	40
	Organizational reasons	-	16	1	-	17
	Own decision	-	-	3	-	3
	Yet to be implemented	-	-	-	1	1
	Total					**61**
Both	Completion: both	22	3	2	2	29
	Completion: cognitive skill training; non-completion: lifestyle training	10	3	-	-	13
	Completion: lifestyle training; non-completion: cognitive skill training	10	-	1	-	11
	Non-completion: both, for organizational reasons	-	19	4	-	23
	Non-completion: both, own decision	-	-	1	-	1
	Yet to be implemented	-	-	-	5	5
	Total					**82**
Total		**369**	**96**	**43**	**33**	**541***

* Note that, based on this column, offenders who took part in the program were divided in six groups: offenders who completed a standard program (n=219); offenders who completed a standard program plus cognitive skill training (n=80); offenders who completed a standard program plus lifestyle training (n=48); offenders who completed a standard program plus cognitive skill training and lifestyle training (n=22); offenders who did not complete the program for organizational reasons (n=96); and offenders who did not complete the program – own decision (n=43). These groups are also represented in Chapter 7, Figure 1, on page 184.