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### The effectiveness of youth crime prevention

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**Publication date**

2016

**Document Version**

Final published version

[Link to publication](#)

**Citation for published version (APA):**

de Vries, L. A. (2016). *The effectiveness of youth crime prevention*. [Thesis, fully internal, Universiteit van Amsterdam].

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# 4.

## **The Effects of the Prevention Program ‘New Perspectives’ (NP) on Juvenile Delinquency and Other Life Domains: Study Protocol for a Randomized Controlled Trial<sup>3</sup>**

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3 De Vries, L. A., Hoeve, M., Asscher, J. J., & Stams, G. J. J. M. (2014). The Effects of the Prevention Program ‘New Perspectives’ (NP) on Juvenile Delinquency and other Life Domains: Study Protocol for a Randomized Controlled Trial. *BMC Psychology*, 2, 1-10.

**Abstract**

*New Perspectives (NP) is a program aiming to prevent that youth at onset of a criminal career will develop a persistent criminal behavior pattern. The effects of NP on juvenile delinquency and other life domains are investigated, using a randomized controlled trial (RCT). In the present study at-risk youth aged 12 to 23 years are assigned randomly to the intervention (n = 80, NP) or control condition consisting of care as usual (n = 80, CAU). After screening, random assignment, and consent to participate, adolescents and their parents are requested to complete questionnaires. Data are collected at four points in time: at baseline (before the start of the intervention), after 3 months, after 6 months (post-test) and 1 year after treatment (follow-up). Primary outcome measures include involvement in delinquent behavior and recidivism. Secondary outcome measures include parenting behavior, peer and parents relationships, cognitive distortions. Other measures include nontargeted (by NP) delinquency-related factors such as substance use. Standardized questionnaires and interviews are used to collect data. Moderator analyses will also be conducted in order to examine the influence of ethnic background, gender and age, and delinquency levels on the program effectiveness. The present study will provide new insights in the effects of a prevention program targeting youth at risk for the development of a persistent criminal career.*

## 4.1 Introduction

Juvenile delinquency can be considered as an important societal problem with negative consequences, such as mental health-, financial-, and work-related problems. Young offenders represent a relatively large proportion of all offenders in the justice system. For example, in 2003, adolescents in the United States accounted for 16 % of all arrests (i.e., 2.3 million arrests), 15 % of all violent crime arrests, 29 % of all property crime arrests and 39 % of all vandalism offenses (Snyder & Sickmund, 2006). The highest levels of prevalence rates of self-reported *total delinquency* (last year) among 12-15-year-old adolescents were found in cities of the United States, Ireland, the Netherlands and Germany (based on 43,968 respondents from 63 cities and 31 countries) (Enzmann, et al., 2010). These countries also showed the highest rates of serious violent delinquency among youth. Approximately one third of the 12-to 17-year-old Dutch adolescents (38 %) reported having committed a criminal offense (Van der Laan & Blom, 2011).

Earlier studies show that severe persistent delinquent behavior of youngsters starts with minor offenses and an accumulation of risk factors in multiple life domains, which could escalate in serious criminal offending (Loeber, Burke, & Pardini, 2009). In order to prevent that juvenile offenders will develop a chronic and persistent criminal career, there is a great urge for evidence-based prevention programs. Given the high costs of intensive treatment and incarceration of delinquents, investing in prevention could also contribute to economic benefits for society.

In the present study we will examine the effects of the prevention program 'New Perspectives' (NP), targeting adolescents at risk for the development of a persistent criminal career. This intensive ambulant program is acknowledged as a well implemented program with a strong theoretical foundation (Van den Braak & Konijn, 2006). The NP program aims to prevent or reduce delinquent behavior and offending. The theoretical framework of NP is based on the *Risk-Needs-Responsivity* (RNR) model (Andrews, Bonta, & Hoge, 1990a). Preventive and curative interventions are most likely to be effective when programs target criminogenic factors and are responsive to the individual needs of adolescents (Andrews & Dowden, 2007). NP is also based on the 'Transtheoretical Model of Behavior Change' (Prochaska & DiClemente, 1984), which describes the stages of behavior change in the context of treatment processes. Moreover, NP can be viewed as a multicomponent program addressing multiple risk factors by including multiple treatment modalities, such as elements of cognitive and problem-solving skills training and involvement of the social network (parents, peers and teachers, etc.). Multi-faceted programs integrating multiple components for parents, youths and their environment (school and community) are considered to be more beneficial than narrowly focused programs in juvenile crime prevention (McCord, Widom, & Crowell, 2001).

Previous evaluation studies of NP (Geldorp, Groen, Hilborst, Burmann, & Rietveld, 2004; Noorda & Veenbaas, 1997) revealed positive results in various areas (such as school, family and peers) for NP youths. However, these evaluation studies lacked the use of a control group. Application of randomized controlled trial (RCT) provides the strongest evidence of

causal relations between a participant's exposure to treatment conditions and changes in deviant behavior (Clingempeel & Henggeler, 2002; Weisburd, 2010). Therefore, the present study involves a randomized controlled trial.

On the basis of earlier international studies of programs aimed at preventing and reducing delinquency and recidivism, we expect to find evidence for positive effects of NP. Positive effects were found for diversion programs, stating that well-implemented programs, integrating behavioral and family-based change strategies, produced reductions in subsequent offenses. These prevention programs targeted youth with only one or two police contacts, who have not yet exhibited a longstanding pattern of severe antisocial and delinquent behavior (Mulvey, Arthur, & Reppucci, 1993). Furthermore, a systematic review (Lösel & Beelmann, 2003) indicated that well-structured multimodal cognitive-behavioral programs were most appropriate for preventing antisocial behavior of adolescents. Hanlon and colleagues (2002) evaluated a multimodal and community-based prevention program, including individual counseling, mentoring and remedial education, targeting youths at risk for the development of a deviant lifestyle. This program proved to be effective in reducing delinquent activity in the long-term (1 year after the intervention). Thus, there is empirical evidence to suggest that multimodal prevention programs are effective.

However, in the international literature, there is no consensus on the degree of effectiveness of programs in preventing persistent delinquency. For example, a meta-analytic study (Deković et al., 2011) examined the long-term effects of prevention programs carried out during early and middle childhood on criminal offending into adulthood. They found no convincing evidence that early prevention programs are able to prevent adult crime. Most of the evaluation studies have focused on prevention in early or middle childhood (e.g., Deković et al., 2011) and on serious and chronic offenders (e.g., Asscher, Deković, Van der Laan, Prins, & Van Arum, 2007a), but in the present study we will investigate the effects of a prevention program targeting youngsters at onset of a criminal career.

The program effectiveness of NP is examined in terms of decreased *delinquent behavior* and *improvements* in life domains of adolescents, such as peers, and parents. Moreover, the study is focused on outcomes that are not directly addressed by NP, but are considered as factors related to delinquent behavior, such as substance use (see D'Amico, Edelen, Miles, & Morral, 2008; Loeber, Stouthamer-Loeber, & Raskin White, 1999). Given that externalizing behavior problems often co-occur with internalizing problems (Barker, Oliver, & Maughan, 2010), we also examine program outcomes related to depression and anxiety. Another important question of present study is related to the intervention effects for specific subgroups of youngsters. The NP client population in Amsterdam is very diverse with respect to ethnic background, gender and age. NP is also divided in different modalities for younger (below 16 years; NP Preventief and NP Plus) and older adolescents (from 16 years; NP). In this respect it is important to detect possible differential effects of NP for these subgroups. In social work research and practice, there is little consensus about the need for, and effectiveness of, ethnically, gender- and age-tailored treatment (Wilson, Lipsey, & Soydan,

2003; Zahn, Day, Mihalic, & Tichavsky, 2009). Although research consistently demonstrates that female juvenile offending is associated with specific risk factors (i.e., different from those of male juvenile offending) (Hipwell & Loeber, 2006), gender-non-specific programs were found to be equally effective in reducing recidivism for boys and girls (Zahn et al., 2009). Also, a large amount of studies revealed that migrant children are at increased risk of mental health problems and experience specific risks related to stress and feelings of alienation due to the migration process (Stevens & Vollebergh, 2008). Despite these different risk factors, mainstream juvenile crime programs were found to be equally effective for minority and majority youth in the United States (Wilson et al., 2003). Moreover, it is well known that the extent and impact of risk factors changes with age. For instance, the influence of peers in the adolescent's behavior increases with age, while the impact of parental supervision decreases with age (Loeber, Slot, & Stouthamer-Loeber, 2006; Van der Put et al., 2011). Consequently, well-founded empirical knowledge about differential effects of prevention programs for different subgroups is needed.

Furthermore, delinquency factors, such as a history of offending, severity of prior offending, and age of first arrest are important predictors of recidivism in delinquent youth (Andrews & Bonta, 2010; Cottle et al., 2001; Loeber & Farrington, 1998). Therefore, we included these risk factors as potential moderators of program effectiveness.

There are, in particular outside the USA, relatively few randomized experiments in the field of criminology (Farrington & Welsh, 2005). Experimental designs can rule out alternative explanations for program outcomes, such as passage of time, effects of assessment, or different types of clients (Cook, 2003). By using an experimental design, the present study will be able to gain more insight into the effects of NP in preventing persistent delinquent behavior and reoffending of at-risk youth. Our study focuses on youth at the onset of a criminal trajectory, who are at risk for persistent offending. This study will also provide more information about improvements in other life areas, such as relationships of youngsters with their parents and peers. In addition, moderators will be investigated in order to enhance the effectiveness of NP for diverse target groups (young and older adolescents, boys and girls, different ethnic backgrounds, and adolescents with different delinquency levels).

## 4.2 Aim of the Study

The aim of this study is to examine the effectiveness of the prevention program 'New Perspectives' (NP) in a sample of youth at risk for the development and progression of a deviant life style. The effects of NP are compared with care as usual (CAU), the comprehensive interventions that are already available. We expect that NP will be more effective than CAU. The effectiveness will be measured in terms of decreased problem behavior and improved quality of life. Primary outcomes are defined as a reduction in delinquent behavior, offending, and recidivism. Furthermore, we will investigate improvements in the individual domain (e.g. self-esteem and cognitive distortions) and in life domains, such as peers, and parents. Finally,

potential moderators (age, ethnicity, gender, and delinquency level) of the effectiveness of NP will be studied.

## **4.3 Method**

### **4.3.1 Study Design**

This study protocol will follow the CONSORT statement (Moher et al., 2010). The design of this study involves a randomized controlled clinical trial (RCT) in which NP will be compared to CAU. Data of adolescents and their parents will be collected at four points in time: prior to treatment (T1 pre-test assessment), after 3 months (T2 the intensive intervention phase), immediately after treatment (T3 post-test assessment, 6 months after T1, the aftercare phase), and 1 year after treatment (T4 follow-up, 12 months after T3).

Adolescents aged 12 to 23, who meet the eligibility criteria of NP (these criteria are described in next section) will be randomly assigned to either NP or CAU. Random assignment per adolescent will be executed by the researcher (first author) using computer generated block randomization. The ratio of the randomization between NP and CAU is 1:1. See Figure 4.1 for the procedure's flow chart.

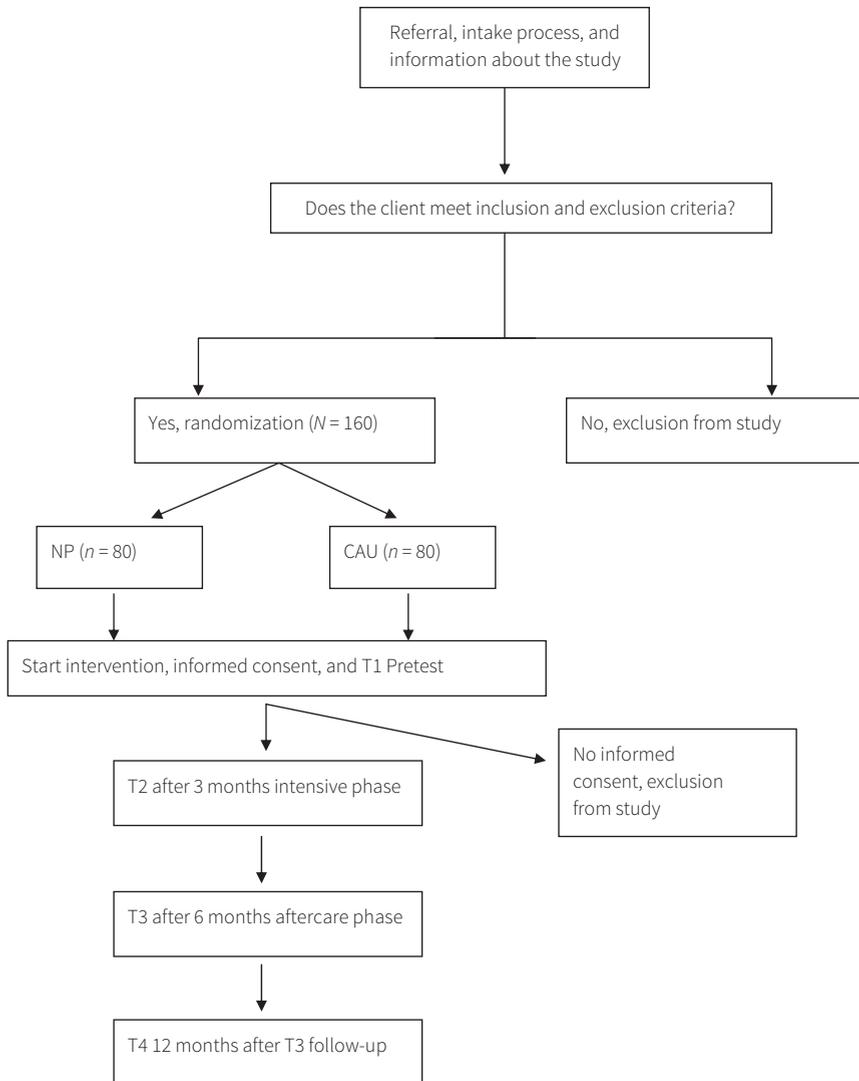
The Ethics Committee of the University of Amsterdam (Faculty of Social and Behavioral Sciences) approved the study design, procedures and informed consent. Participation is voluntary and all participants (adolescents) will be asked to provide written informed consent at first assessment. Parental consent will be obtained when the adolescent is younger than 16.

### **4.3.2 Sample**

Power calculations indicated that 80 adolescents per condition (assuming an alpha of 0.05, 0.95 power, and a medium effect size, based on power calculations of G\*Power; Faul, Erdfeler, Buchner, & Lang, 2009), are sufficient to detect a difference in problem behavior at post-test. There is also sufficient power to perform moderator-analyses for different subgroups (Power > .80 to detect medium effects for 2 to 4 groups). Therefore, a total of 160 adolescents and parents will be included.

Adolescents are eligible for participation if they meet the following criteria: (1) age 12 to 23 years, (2) experiencing problems on multiple life domains (school, family, peers, leisure time), and (3) at risk for the development and progression of a deviant life style, such as predelinquents with antisocial behavior, first time offenders and adolescents with mainly minor police contacts and offenses (such as, purposely damage or destroy property, shop lifting and joyriding). Exclusion criteria are an IQ below 70, severe psychiatric problems, severe drugs-or alcohol use (dependency), absence of residence status in the Netherlands, and absence of motivation to stop committing criminal acts. NP-clients may be court-ordered, but are mainly referred by (primary or secondary) schools, social workers or they may be self-referred.

**Figure 4.1 Flow Diagram NP Effect Study**



Note. NP, experimental group, CAU, control group

### 4.3.3 Procedure

The participants will be recruited via five locations of a large youth care institution in Amsterdam, the Netherlands. At the time of referral, adolescents and their parents will be informed about the NP-effectiveness study. After screening for the inclusion and exclusion criteria by clinical professionals at the youth care institution, adolescents are randomized to NP or to CAU. Immediately after randomization an appointment will be made in order to obtain written informed consent and to conduct the first assessment. The assessments

will be carried out by junior researchers and master students (of Forensic Child and Youth Care Sciences). These students and researchers will be trained by means of a standardized protocol.

Adolescents and parents will complete self-report questionnaires using an online computer program at home. Both questionnaires have a login code to secure privacy. Youth will receive €20 and parents €10 per completed assessment. The youth care workers will fill out three questionnaires directly after the intensive intervention phase. The data will be treated as confidential: participants receive a unique code which is used for the online computer program and other research documents. Names are omitted and researchers declare that they will not provide any information of participants to third parties without their permission.

#### **4.3.4 Intervention**

Youths in the experimental condition will receive the intervention New Perspectives (Elling & Melissen, 2007), an intensive, short-term and community-based program targeting youth at risk for (persistent) juvenile delinquency. The main purpose of NP is to prevent or reduce delinquent behavior and offending. Moreover, the program aims to improve the quality of life and addresses several key systems (home, school, peers and neighborhood) in which the adolescent is embedded. The target group consists of at-risk youth from 12 to 23 years who are confronted with a sum of risk factors, in domains such as individual behavior, family and friends, school/work, and neighborhood. The NP program consists of an intensive coaching phase of 3 months followed by a 3-month aftercare phase. The total duration of the program is 24 weeks. Youth care workers, who have low caseloads, are available 24 hours a day, seven days per week. The average contact intensity per week is 8 hours per client. The following core activities and modalities are carried out by youth care workers: setting goals (in consultation with the client), coaching and confronting, motivational interviewing, empowerment and reinforcement of the social network (involvement of parents, peers, teachers, etc.), practical support, cognitive restructuring, problem-solving skills, and modeling (social workers act as role models) (Elling & Melissen, 2007).

The control condition consists of care as usual (CAU), other existing standard services of youth care in Amsterdam. These services include child welfare services, such as family and/or individual counseling, social and/or cognitive behavioral skills training, academic service coaching, and mentoring.

#### **4.3.5 Instruments**

*Delinquent behavior* among adolescents is the primary outcome measure. Participation and frequency in offending, will be assessed by the 'Self-report Delinquency Scale' (SRD, Van der Laan & Blom, 2006; Van der Laan, Blom, & Kleemans, 2009). The SRD scale consists of 33 items divided in three types of delinquent behavior: *violent crime*, *vandalism*, and *property crime*. The acts range in severity from vandalism and petty theft up to injuring someone with a knife

or other weapon. First, for the 33 types of offending activities, participants will be asked if they had ever been involved in each of these acts. Examples of items are: "Have you ever wounded anyone with a knife or other weapon?" and "Have you ever covered walls, buses, or entryways with graffiti?" Next, for each of the acts, where respondents answer with "yes", they are then asked how often they participated in diverse delinquent acts during the past 3 months. *Recidivism* will be assessed with data of the Judicial Information Service (JustID). Documentation of JustID provides information on the number of (re)arrests, and the type and severity of (re)offense during the research period.

*Parenting behavior*, in particular warmth, responsiveness (parental support), explaining, autonomy (authoritative control), strictness and discipline (restrictive control), will be assessed with the 'Parenting Behavior Questionnaire' (PBQ, Wissink, Deković, & Meijer, 2006). The PBQ is applicable for different ethnic groups and could be used for both parental and juvenile reports. Parental monitoring will be measured by the 'Vragenlijst Toezicht Houden' (VTH), the Dutch version of the parental monitoring scale of Brown and colleagues (1993). Adolescents fill out how much their parents know about who their friends are; how they spent their money; where they were after school; which place they went when they left home; what they did in their leisure time; and what grades they received at school.

*Quality of parent-adolescent relationship* will be assessed by using the short Dutch validated version of the 'Inventory of Parent and Peer Attachments' (IPPA, Buist, Deković, Meeus, Van Aken, 2004; Gullone & Robinson, 2005). This instrument is designed to assess the extent to which adolescents felt secure by measuring the adolescents' trust in availability and sensitivity of the attachment figure, the quality of communication and the extent of anger and alienation in the relationship with the attachment figure.

*Adolescents' perceptions of peer affiliations* will be measured by the Dutch version of the 'Friends' scale which is a part of the 'Family, Friends & Self Scale' (FFS, Deković, Wissink, & Meijer, 2004; Simpson & McBride, 1992). Adolescents indicate how many of their friends participated in a variety of deviant behaviors (e.g., purposely damage or destroy property). Affiliation with prosocial peers is measured by items of the FFS concerning prosocial activities (e.g. *good grades* and *sport*). The intensity of contact with peers is measured by a subscale of the 'Basic Peer Questionnaire' (BVL, Weerman & Smeenk, 1981). Adolescents answer how often they spend time with their peers during the week and weekends.

*Cognitive distortions* of adolescents will be assessed using the Dutch validated version of the 'How I Think Questionnaire' (Dutch version: HID) (Gibbs, Barriga, & Potter, 2001; Nas, Brugman, & Koops, 2005). The HIT is based upon four-category typology of self-serving cognitive distortions: self-centered attitude, blaming others, minimizing-mislabeling (consequences of) behavior, and assuming the worst (Barriga et al., 2000). Self-esteem or feelings of worth and satisfaction with self will be measured by using the 'Competentie Belevingsschaal voor Adolescenten' (CBSA, Treffers et al., 2002). This questionnaire is a Dutch version of the global self-worth subscale from the 'Self-Perception Profile for Adolescents' (Harter, 1982; 1988).

*Prosocial behavior* of adolescents will be assessed by the 'Prosocial Behavior Questionnaire' (PBQ, Weir & Duveen, 1981). This questionnaire is designed to measure positive aspects of adolescents' behavior. *Aggressive behavior* will be measured by the Dutch self-report validated version of the 'Buss-Durkee Hostility Inventory' (BDHI-D, Lange, Dehghani, & De Beurs, 1994). The BDHI (Buss & Durkee, 1957) consists of two subscales 'Overt Aggression' (measuring the tendency to express verbal or physical aggression) and 'Covert Aggression' (determining the emotional and cognitive components: hostility, irritability, suspicion, and anger). *Externalizing behavior* will be measured by the 'Sociaal-Emotionele Vragenlijst' (Social Emotional Questionnaire, SEV, Scholte & Van der Ploeg, 2007). The SEV is based on the core symptoms of behavior problems classified in the DSM and ICD: attention deficits and hyperactivity, oppositional defiant, conduct and aggressive behavior, anxiety, depression, and autistic behavior. Parents report how often their child shows problem behavior. *Substance abuse and dependency* of adolescents will be measured by the CRAFFT Substance Abuse Screening Test (Knight, Sheritt, Shier, Harris, & Chang, 2002). The CRAFFT is a specialized self-report screen to address both alcohol and drug dependency (Winters & Kaminer, 2008).

*Internalizing problems* will be measured by the 'Child Depression Inventory-2' (CDI-2, Breat & Timbremont, 2002) and the 'Spence Children's Anxiety Scale' (SCAS, Spence, 1998). The CDI-2 is a revision of the CDI (Kovacs, 1985) and was translated in Dutch. This questionnaire is designed for measuring depressive symptoms (based on DSM-IV) of adolescents in different settings (at school; in child youth care settings). Adolescents report how they felt in the last two weeks. The SCAS is based on the DSM-IV and measures following symptoms of anxiety: generalized anxiety, separation anxiety, social phobia, panic disorder, agoraphobia, obsessive-compulsive disorder, and specific phobia (Spence, 1998; Scholing, Nauta, & Spence, 1999). Adolescents' internalizing behavior will also be assessed by using parent reports on three subscales of the SEV (Scholte and Van der Ploeg 2007): general anxiety, social anxiety, and depressive behavior.

*Treatment integrity* will be assessed by process evaluations consisting of analyses of program documents and protocols, structured interviews with program directors and staff, and observations (site visits). Moreover, we will conduct assessments with the social workers of NP through a structured program evaluation checklist which is based on the core elements of the intervention (the results of these assessments will not be presented in this dissertation, but in a separate report: De Vries, Hoeve, Asscher, & Stams, 2014).

The concepts, sources, informants, and times of assessment for all used instruments are presented in Appendix 4.A. All questionnaires will be administered at all measurement moments

## 4.4 Statistical Analysis

Primary analyses will be performed according to the intention-to-treat principle (Montori & Guyatt, 2001). The primary (involvement in delinquency, SRD) and secondary continuous measures of the short-term program effects (the first three measurements) will be analyzed with repeated measures univariate analyses (ANOVA) and multivariate analyses (MANOVA). To examine effects of potential moderators, we will apply three-way interactions in the repeated measures design. The effect of the intervention with regard to the difference in official arrest rates (recidivism) between the experimental and control group will be examined using survival analysis (cox regression). The long-term effects on self-reported delinquency will be tested with ANCOVA's using the outcome measures at post-and follow-up as dependent variables, treatment condition as factor and pre-test scores as covariates. Moderator analyses will be conducted using two-way ANCOVA's with the moderators and treatment condition as factors, to examine interaction effects. For each questionnaire, the effect size is computed as Cohen's *d*, based on adjusted means and standard errors, with a positive sign indicating improvement in the NP group relative to the control group.

## 4.5 Discussion

This article describes the study protocol of a program evaluation of the prevention program 'New Perspectives' (NP). This study is one of the few randomized clinical trials in Europe examining a program targeting youth at risk for the development of a persistent criminal career (Farrington & Welsh, 2005). By conducting an experimental research strategy (RCT) we will be able to control for confounding effects more accurately than in studies with other designs. Furthermore, there are several strengths with regard to the design of the present study.

First, this evaluation study is carried out in the routine youth care practice, which contributes to the ecological validity of the findings. In addition, the use of an active control condition (care as usual) under real life conditions gives more insight in the unique contribution of NP compared to standard youth care interventions. This information is crucial for practitioners, policy makers and politicians in order to determine which prevention programs can best be implemented.

A second strength is the examination of potential moderators. We focus on moderators, such as ethnicity, age and gender. Moderator analyses establish under which circumstances interventions are effective in reducing problem behavior (Clingempeel & Henggeler, 2002). Through this method we could detect whether NP is effective with older or younger adolescents, boys or girls, and with adolescents from different ethnic backgrounds. Further, our study includes diverse secondary outcome measures (e.g., cognitive distortions) leading to a better understanding of processes that could mediate the relation between the intervention and delinquent behavior.

Third, when examining the effects in terms of delinquent behavior we distinguish between involvement in, frequency and seriousness of delinquent acts. These specific measures of criminal offending contribute to a more detailed view on program effectiveness (Farrington & Welsh, 2005). Moreover, the investigation of long-term effects up to one year after the intervention could identify possible sleeper effects.

Despite these strengths, several pitfalls of this study design should be mentioned. One of the greatest challenges in conducting randomized experiments is avoiding drop-outs of respondents. In order to decrease the risk of drop-outs, we will apply a pre-randomization trial. The randomization will be conducted before active informed consent of respondents, which promotes random allocation and improves inclusion of participants. As a consequence, we need full cooperation of all referral institutions in providing sufficient information about the effect study before randomization. Therefore, we will actively inform all referral institutions in Amsterdam about the research design. In order to gain full cooperation of all institutions, we will start informing management staff of the most important youth care organizations in Amsterdam. Next, all involved institutions will receive detailed instructions about the study design through presentations of the researchers (on local levels).

Furthermore, in order to avoid drop-out during the research period, we will minimize efforts of youths and their parents through the application of online questionnaires. Researchers will visit respondents in their own environment (at school, at home, etc.). The youth care workers will facilitate the assessments by inviting researchers directly after their client appointments. At first assessment, youths and parents will be clearly informed about the importance and content of the study.

A final important risk of the present study design concerns the use of an active control condition (care as usual). Comparing NP to an active control condition (of other standard interventions) may lead to an underestimation of the mean effect size. The heterogeneous nature of the CAU condition and the possible evidence-based treatments (e.g., CBT) within this condition could result in a lower mean effect size. This methodological problem will be reduced by increasing the power.

#### **4.5.1 Conclusion**

The present study will provide more insight in the effects of the prevention program 'New Perspectives' (NP) on a broad range of outcomes. More specific knowledge will be obtained about the effects for different subgroups of youngsters. This information will contribute to improvement of programs for adolescents at risk for the development of a persistent criminal career.

**Appendix 4.A Domains, Concepts, Instruments, Assessments, and Informants**

Domain	Concept	Instrument	Instrument (abbreviation)	Informant	T1	T2	T3	T4
Primary Outcome Delinquency	Recidivism	Official Judicial Records		Judicial Information Service				
	Delinquent Behavior	Self-reported delinquency	SRD	Adolescent	X	X	X	X
Secondary and other outcomes	Parenting Behavior	Parental Support, Authoritative and Restrictive Control	Parenting Behavior Questionnaire	Adolescent, Parent	X	X	X	X
		Parental Monitoring	'Vragenlijst Toezicht houden'	Adolescent, Parent	X	X	X	X
Attachment	Adolescent-Parent attachment	Inventory of Parent and Peer Attachment	IPPA	Adolescent	X	X	X	X
	Prosocial and Deviant Peer Friendships	Family, Friends & Self scale	FFS	Adolescent	X	X	X	X
Skills	Contact Intensity	'Basisvragenlijst leeftijdgenoten'	BVL	Adolescent	X	X	X	X
	Cognitive Distortions	How I Think Questionnaire	HID	Adolescent	X	X	X	X
	Prosocial Behavior	Prosocial Behavior Questionnaire	PB	Adolescent	X	X	X	X
	Self-esteem	'Competentie Belevingsschaal voor Adolescenten'	CBSA	Adolescent	X	X	X	X
Externalizing and Internalizing Behavior Problems	Attention Deficit, Hyperactivity, Impulsivity and Social Behavioral Problems, Anxiety, Depression	'Sociaal-Emotionele Vragenlijst'	SEV	Parent	X	X	X	X
	Anxiety	Spence Children's Anxiety Scale	SCAS	Adolescent	X	X	X	X
	Depression	Children's Depression Inventory	CDI	Adolescent	X	X	X	X
	Aggression	Buss-Durkee Hostility Inventory	BDHI	Adolescent	X	X	X	X
	Substance Use	CRAFFT	CRAFFT	Adolescent	X	X	X	X