

# VU Research Portal

## Previously institutionalized youths on the road to adulthood

Verbruggen, J.

2014

### **document version**

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

### **citation for published version (APA)**

Verbruggen, J. (2014). *Previously institutionalized youths on the road to adulthood: A longitudinal study on employment and crime*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

Previously institutionalized youths on the road to adulthood  
A longitudinal study on employment and crime

*Published, sold and distributed by Eleven International Publishing*

P.O. Box 85576

2508 CG The Hague

The Netherlands

Tel.: +31 70 33 070 33

Fax: +31 70 33 070 30

e-mail: [sales@budh.nl](mailto:sales@budh.nl)

[www.elevenpub.com](http://www.elevenpub.com)

*Sold and distributed in USA and Canada*

International Specialized Book Services

920 NE 58th Avenue, Suite 300

Portland, OR 97213-3786, USA

Tel: 1-800-944-6190 (toll-free)

Fax: +1-503-280-8832

[orders@isbs.com](mailto:orders@isbs.com)

[www.isbs.com](http://www.isbs.com)

Eleven International Publishing is an imprint of Boom uitgevers Den Haag.

ISBN 978-94-6236-445-5

ISBN 978-94-6274-105-8 (E-book)

Cover image: © Norbert Schillemans

© 2014 J. Verbruggen | Eleven International Publishing

This publication is protected by international copyright law.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher.

Printed in The Netherlands

VRIJE UNIVERSITEIT

# **Previously institutionalized youths on the road to adulthood**

**A longitudinal study on employment and crime**

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad Doctor aan  
de Vrije Universiteit Amsterdam,  
op gezag van de rector magnificus  
prof.dr. F.A. van der Duyn Schouten,  
in het openbaar te verdedigen  
ten overstaan van de promotiecommissie  
van de Faculteit der Rechtsgeleerdheid  
op donderdag 18 september 2014 om 13.45 uur  
in de aula van de universiteit,  
De Boelelaan 1105

door

**Janna Verbruggen**

geboren te Amsterdam

promotoren:      prof.dr.mr. W. Huisman  
                      prof.dr. G.J.N. Bruinsma  
                      prof.dr.mr. A.A.J. Blokland  
copromotor:      dr. V.R. van der Geest





# CONTENTS

1	GENERAL INTRODUCTION	9
2	EFFECTS OF EMPLOYMENT AND UNEMPLOYMENT ON SERIOUS OFFENDING IN A HIGH-RISK SAMPLE OF MEN AND WOMEN FROM AGES 18 TO 32 IN THE NETHERLANDS	35
3	WORK, INCOME SUPPORT, AND CRIME IN THE DUTCH WELFARE STATE. A LONGITUDINAL STUDY FOLLOWING VULNERABLE YOUTHS INTO ADULthood	59
4	EFFECTS OF UNEMPLOYMENT, CONVICTION, AND INCARCERATION ON EMPLOYMENT. A LONGITUDINAL STUDY ON THE EMPLOYMENT PROSPECTS OF DISADVANTAGED YOUTHS	87
5	ADULT LIFE ADJUSTMENT OF PREVIOUSLY INSTITUTIONALIZED YOUTHS. THE RELATIONSHIP BETWEEN CRIMINAL HISTORY, EMPLOYMENT HISTORY, AND ADULT LIFE OUTCOMES	111
6	GENERAL DISCUSSION	131
	REFERENCES	151
	SAMENVATTING (DUTCH SUMMARY)	163
	DANKWOORD (ACKNOWLEDGEMENTS)	173
	CURRICULUM VITAE	175
	PUBLICATIONS	177





*It is January 1995 when four young people are discharged from a juvenile justice institution in the eastern part of the Netherlands. James is 18 years old, Ray 17, and Regina and Ellen are aged 16, and at their young age, they have already experienced problems in multiple domains. They all grew up in a problematic family environment, experienced difficulties in school, suffered from psychological and behavioral problems, and engaged in delinquent behavior. As the gate behind them closes, they walk to the train station. Then they all go their separate ways. How will each of them fare on the road to adulthood?*

## 1.1 INTRODUCTION

In the Netherlands, over 4,000 youths are institutionalized in juvenile justice or youth care institutions every year because there are serious concerns about their behavior and development (Jeugdzorg Nederland, 2011; 2013; CBS Statline, 2013). In general, these youths are characterized by troubled backgrounds: they grew up in adverse family situations, show poor school performance, suffer from psychological problems, and exhibit serious behavioral problems and more often than not (serious) delinquency. When previously institutionalized youths begin to make the transition into adulthood, they may find that because of their vulnerable background, they face difficulties adapting to conventional adult social roles (Osgood, Foster, Flanagan & Ruth, 2005).

One of the most important adult roles is employment. Work not only generates income and therefore contributes to financial independence and security, it also provides structure to everyday life, feelings of usefulness and purpose, social contacts, and status (Jahoda, 1982). Employment is thus of great importance for one's identity, well-being, and psychological health (Hulin, 2002; Paul & Batinic, 2010). Although work is important for all young adults, it is especially important for vulnerable youths, as it helps them transition into adulthood successfully. Having a job gives these youths the opportunity to learn and develop new skills and take on adult responsibilities. It provides them with social status, which helps them form a conventional identity and adopt a non-criminal lifestyle (Chung, Little & Steinberg, 2005; Hulin, 2002). However, especially in making the transition to the labor market, these youths face considerable hurdles and need to overcome obstacles in multiple domains.

To begin with, previously institutionalized youths generally are more likely to attain lower levels of education or drop out of school, diminishing their opportunities of getting a job, especially the more stable and higher-qualified types of employment. In addition, because these youths usually grew up in adverse or disadvantaged family environments, they tend to have few social and economic resources and often have no legitimate job networks at their disposal to help them achieve educational and occupational milestones. Moreover, they often suffer from behavioral, psychological, or psychiatric problems, which might make it more difficult for them to function in a work setting. Finally, the stigma resulting from their delinquency and institutionalization during adolescence might limit their legitimate adult employment opportunities (Uggen & Wakefield, 2005). These youths thus experience a multitude of problems, which makes a successful transition into the labor market difficult (Chung et al., 2005). This, in turn, can exacerbate their problem behaviors and contribute to the development of persistent criminal behavior and other adverse adult outcomes.

Little is known about the actual adult outcomes of previously institutionalized youths. How are they faring on the road to adulthood? To what extent do they engage in criminal behavior in adulthood? Are they able to make a successful transition into one of the most important adult life domains: the labor market? And how many of them end up living conventional lives? To answer these questions, the central aim of this thesis is to provide insight into the role of employment and crime in the adult lives of these vulnerable youths. Therefore, this dissertation aims to examine (1) the effect of employment on offending, (2) the effects of conviction and incarceration on employment chances, and (3) the extent to which employment and crime influence adult life adjustment.

To shed light on the adult outcomes of previously institutionalized youths and provide insight into the relationship between their employment careers and their criminal careers, this dissertation focuses on the lives and crimes of a sample of formerly institutionalized youths as they transition into adulthood. The sample consists of boys and girls who, when they were 15 years old on average, were institutionalized in a Dutch juvenile justice institution in the 1990s and were followed into their thirties. Using both officially registered longitudinal data on their employment and criminal careers and self-report data on adult life outcomes, this dissertation examines different aspects of the relationship between employment and crime, as well as adult life outcomes in this at-risk group. Since this is considered to be a high-risk sample, all empirical chapters focus on *serious* offending, as will be described in more detail below in the data paragraph (1.5).

By studying this sample of previously institutionalized youths, this study builds upon prior research on the work-crime relationship. Namely, the nature of the data enables me to test a number of theories addressing the work-crime relationship using longitudinal data, for both men and women, and in the Dutch context. These important contributions to the existing body of literature are discussed in more detail in the next paragraphs.

The organization of the remainder of this introduction chapter is as follows. First, the theoretical framework is outlined, followed by a short overview of

previous research on the work-crime relationship. Then, the research questions and hypotheses that are addressed in this thesis are outlined, and the expected theoretical and empirical contribution of this study to the existing body of literature is discussed. Subsequently, the data that are used for this thesis are described. The chapter concludes with a description of the structure of the dissertation.

## 1.2 THEORETICAL FRAMEWORK

### 1.2.1 *Effects of employment on crime*

There are several theories that assume that employment has an independent causal effect on offending and therefore that work can help vulnerable youths desist from crime. To begin with, there are theories that focus on the monetary aspect of work. These theories argue that individuals who experience poverty, either absolute or relative, are more likely to be engaged in crime, and that, because being employed means receiving a steady income, work decreases the motivation for crime (Becker, 1968; Ehrlich, 1973; Merton, 1938, 1968). According to strain theory, for instance, people experience strain or frustration when they, due to blocked legitimate opportunities, are unable to achieve the level of monetary success that they desire. Resorting to criminal activities in an attempt to fulfill financial needs is viewed as an innovative way of alleviating feelings of strain (Cloward & Ohlin, 1960; Merton, 1968). Since employment generates income, employed individuals are less likely to experience strain and are therefore thought to be less motivated to engage in (acquisitive) crime than those who are unemployed. A critique of strain theory is that, by focusing on the financial motivation for crime, the theory is less well suited to explain non-acquisitive crime.

Other theories assume that crime is not merely financially motivated, and therefore that relieving financial strain alone is not sufficient to reduce criminal behavior, but emphasize other non-monetary aspects of work that can prevent people from committing crimes. According to these theories, employment provides structure to everyday life, leaving less time for unstructured activities that are associated with engaging in criminal behavior. Moreover, people who work often experience direct social control from their boss or co-workers, which limits time and opportunities for deviant behavior (Laub & Sampson, 2003; Shover, 1996). However, the workplace can also provide opportunities for criminal behavior, especially when a job is characterized by high autonomy and little supervision (e.g., Felson, 2006; Mars, 1982).

In addition, Sampson and Laub (1993) emphasize that bonds to conventional social institutions, such as employment, also provide a source of indirect or informal social control, which more gradually contributes to desistance. Attachment to a high-quality, stable job provides people with feelings of responsibility, usefulness, and competence. Over time, these aspects result in investments in social capital – a growing stake in conformity – and increased identification

with a conventional, non-criminal lifestyle. The employed individual thus has more at stake by committing crimes than just losing the monetary benefits of work and therefore is increasingly less likely to engage in crime (Laub & Sampson, 2003; Sampson & Laub, 1993).

### *1.2.2 Employment prospects of vulnerable youths*

Employment is thus thought of as having the potential to beneficially influence the criminal behavior of high-risk youths and to help them in adopting a conventional lifestyle. In general, however, the employment prospects of vulnerable youths are limited for at least two important reasons. First, due to their troubled backgrounds and limited academic success, vulnerable youths are at risk of failing to make a successful transition to the labor market and experiencing spells of unemployment early in their employment careers. Experiencing a period of unemployment has detrimental effects on subsequent employment outcomes (Arulampalam, Gregg & Gregory, 2001; Luijkx & Wolbers 2009). According to signaling theory (Spence, 1973), an employer is less likely to hire a job applicant with a gap in his or her employment history, because this is viewed as signaling negative worker characteristics, such as low productivity, inferior worker quality, and bad job performance. Work experience, on the contrary is taken as a positive signal. In addition, spells of unemployment negatively affect personal skills and experience. Human capital theory states that employment offers the opportunity to invest in human capital, and to generate general work experience, as well as specific skills and knowledge. Investments in human capital (including education, work experience, and on-the-job training) increase one's market value and thus the chance of being employed (Becker, 1964). Unemployment leads to human capital depreciation, since it not only undermines the accumulation of human capital, but also because existing skills can deteriorate as they go unused, thereby decreasing an individual's employability.

Second, vulnerable youths are also likely to experience difficulties in the labor market due to their delinquent behavior in adolescence, their institutionalization, and, possibly, criminal behavior and a criminal record in adulthood. For example, engaging in antisocial or criminal behavior at work can make it difficult to maintain a job. Furthermore, formal sanctions following crime can have detrimental effects on employment outcomes as well. Classic labeling theories argue that people who engage in crime and have had contact with the criminal justice system are publicly labeled as deviant (Becker, 1963; Lemert, 1967). According to these theories, individuals with a criminal history are viewed by others as different and assumed to have undesirable characteristics such as untrustworthiness or aggressiveness. Employers may view labeled individuals as undesirable job candidates and might therefore be less willing to hire ex-offenders. A criminal label thus can block access to conventional employment opportunities (Holzer, Raphael & Stoll, 2003; Pager, 2003). In addition, labeled individuals might also anticipate that employers are not likely to hire them, so they adjust their expectations and job-seeking behavior and are more likely to accept unstable, low-quality jobs or totally withdraw themselves from

the (formal) labor market. In sum, according to labeling theory, conviction and incarceration have negative effects on the individual's employment career due to the stigma constituted by a criminal background.

Incarceration spells are likely to have additional negative effects on the employment prospects of vulnerable youths through the process of human capital deterioration. As with unemployment, human capital accumulation is interrupted when an individual is incarcerated. The opportunity to gain work experience on the job is terminated, and the longer the incarceration spell, the more likely existing general skills will erode (Holzer et al., 2003; Kling, 2006). Yet, as inmates can have the opportunity to participate in education and work programs while in prison, incarceration may also contribute to an increase rather than a decrease in human capital.

In sum, while employment is thought to be of potentially great importance for formerly institutionalized youths, for them to participate in the conventional society and help them refrain from a criminal lifestyle, in reality these youths can find that conventional employment opportunities are diminished or even totally 'knifed off' because of their troubled background, earlier criminal behavior, and history of institutionalization (Moffitt, 1993; Sampson & Laub, 1997). As a result, they are left with little opportunity to create a bond to conventional society and to invest in social capital and are therefore more likely to continue their criminal behavior. They are thus at risk of becoming trapped in a downward spiral, making it increasingly difficult to make positive life changes, a process referred to as cumulative disadvantage (Sampson & Laub, 1997). Thus, previously institutionalized youths who continue to engage in criminal behavior are at risk of increasing marginalization, while those who do manage to find employment may break out of the vicious circle and start increasing their chances to become established in adult life domains.

### 1.2.3 *A causal relationship between (un)employment and crime?*

The aforementioned theories assume that a causal relationship between (un)employment and crime (and its consequences) exists. However, this theoretical stance has not been uncontested. Some have argued that the relationship between employment and crime results from selection effects. Gottfredson and Hirschi (1990), for example, state that people differ in their level of self-control and that individuals with low levels of self-control are not only more likely to engage in criminal behavior but also likely to be unsuccessful in other life domains, such as the labor market. Traits like impulsiveness, aggressiveness, self-centeredness, and a strong here-and-now orientation while conducive to crime may not be good worker characteristics. Due to these stable individual characteristics, certain people tend to self-select into both unemployment and criminal behavior. According to Gottfredson and Hirschi, any observed relationship between (un)employment and crime is therefore spurious rather than causal, and the 'effects' of employment on crime, or of formal reactions to crime on employment chances, will disappear as selection effects are taken into account.

For institutionalized youths, this raises the question to what extent they will ever end up leading conventional lives, in a sense that they are able to desist from crime and successfully adapt to adult social roles such as employment. According to Moffitt (1993; 1994), some individuals, the 'life-course persisters', will engage in antisocial behavior throughout their lives. These individuals are characterized by neuropsychological deficits that, in interaction with a dysfunctional family environment, shape a persistent pattern of problematic behavior. However, the manifestation of this problematic behavior differs as the social circumstances and opportunities change over the life course. To illustrate, according to Moffitt, while life-course persisters are able to make the transition to work, it is difficult for them to benefit from the positive aspects that employment offers, and they might even use the opportunities that the workplace provides to engage in deviant behavior (Moffitt, 1994).

Theories that focus on individual differences thus argue against any causal effect of employment on crime and state that for most – if not all – offenders, the link between (un)employment and crime is due to selection rather than causation. These static or trait theories are generally less optimistic about the adult life prospects of high-risk youths than dynamic theories and expect long-term difficulties in different adult life domains. However, dynamic theories also caution that even if criminal development is susceptible to outside influence, if left unaddressed, a cumulative pattern of disadvantage may very well yield equally grim results.

#### 1.2.4 *Gender differences in the relationship between employment and crime?*

The theories on effects of employment on crime and crime on employment discussed above were mostly developed based on males; thus, it is still unclear whether to expect gender differences in the work-crime relationship. To begin with, it is unknown whether unemployment affects financial motivation for crime in the same way for men and women. It can be argued that unemployed men are more financially motivated to commit crimes than unemployed women. For example, since men are still more often the primary earner than women (De Beer, 2005), men will have a stronger financial motivation to commit (acquisitive) crime when they become unemployed. In addition, unemployed men and women might respond differently to strain. Males, who are generally more concerned with material success, are more likely to resort to crime and commit serious offenses. Females, on the other hand, more often respond to strain not only with anger but also with depression and therefore may be less likely to commit crime, but instead more likely to exhibit self-destructive forms of behavior (Broidy & Agnew, 1997).

However, it might also be that the financial motivation to engage in crime is stronger for unemployed women than for unemployed men. Particularly, when unemployed women single-handedly have to take care of their children without any financial support of the father, a situation which may not be uncommon, in particular in vulnerable groups, these women might experience more difficulties providing for their family and might therefore be more motivated



than unemployed men to engage in income-generating crime (Broidy & Agnew, 1997).

Furthermore, men and women might differ in the extent to which they experience social control both in the workplace environment and outside of it. For one, employed women might experience less (informal) social control than employed men, because women more often work part-time (De Beer, 2005), and might therefore have less opportunity to create and strengthen the bond with work. Yet, when women do develop meaningful relationships with their co-workers, they might be less willing to risk losing their job by committing crimes, because women are generally more concerned with maintaining social relationships than men (Giordano, Cernkovich & Rudolph, 2002; Uggen & Kruttschnitt, 1998). On the other hand, it can be reasoned that because men attach more psychosocial meaning to work and derive status and a sense of identity from their jobs to a larger extent than women do (Jahoda, 1982; McFayden, 1995), they are less likely than women to put their job at stake by committing crime. Outside the workplace environment, unemployed women more so than unemployed men might have access to alternative conventional adult social roles, such as the role of mother, which – like work – provide both social control and structure in everyday life (Paul & Moser, 2009), diminishing the effects of work for women.

Also, with regard to the hypothesized detrimental effects of unemployment, conviction, and incarceration on employment chances, it is unclear whether to expect gender differences. Women in general have weaker labor market attachment than men, because they are more often employed in part-time and lower-quality jobs. Women also interrupt their employment careers more often than men, especially when they have children. As a result, women have fewer opportunities to invest in work-related human capital (Luijkx & Wolbers, 2009; Mooi-Reçı, 2008). However, employers are usually aware of these gender differences, which means that, for women, their relative lack of human capital may play a less important role in the hiring decision, especially for low-skilled, low-paid, or temporary jobs (Barron, Black, & Loewenstein, 1993; Blau & Kahn, 2000).

There are also indications however that women are more negatively affected by the stigma attached to involvement in criminal behavior than are men. Overall, women are less involved in crime than men, but the women that do engage in criminal behavior might be judged more harshly, because crime is perceived as more problematic for women than for men (Bartusch & Matsueda, 1996; Davies & Tanner, 2003; Hagan, McCarthy & Foster, 2002). A criminal record may therefore yield a greater stigma for women compared to men. In addition, low-skilled women usually work in service or retail, and for these jobs certain personality traits such as being friendly are generally deemed more important, for example, because they involve direct contact with customers. Since a criminal label is thought to signal negative personal characteristics and perhaps even more so for women than for men, women with a criminal history are less likely to be hired for these kinds of jobs. Low-skilled men in general apply for jobs without a service or public function, such as jobs in construction, where these assumed negative characteristics matter less (Davies & Tanner, 2003; Holzer et al., 2003;



Tanner, Davies & O'Grady, 1999). Although a stereotypical distinction between typical male and female professions is thought to have declined over the past decades, this is particularly true for higher-qualified employment, while occupational segregation by gender still holds for low-skilled jobs (Blau, Brummund & Liu, 2013; Dolado, Felgueroso & Jimeno, 2001).

#### 1.2.5 *The relationship between employment and crime in the Netherlands*

Besides being based largely on males, theories on the work-crime relationship were mostly developed to explain the work-crime relationship observed in Anglo-Saxon countries. The societal context of these countries, however, differs greatly from the context that exists in Western European countries such as the Netherlands. As a result, it is largely unknown to what extent these theories are applicable to the relationship between employment and crime in the Netherlands.

##### **The Dutch welfare state**

Esping-Andersen (1990) developed a typology in which welfare state regimes are classified by their degree of 'decommodification'. This refers to the extent to which the state offers its citizens social security because it is thought to be a social right, rather than them being (solely) dependent on the market. This typology can be used to understand the position of the Dutch welfare state compared to other countries. Social democratic regimes, characteristic of Scandinavian countries, have highly decommodified policies providing universal entitlements with relatively generous levels of social security. Conservative regimes, which include many countries in continental Western Europe, provide for comparatively strong entitlements but make benefit levels dependent on contributions. Liberal regimes, such as those found in Anglo-Saxon nations, have relatively highly commodified policies that impose strict eligibility criteria and provide for minimal benefits (see also De Mooij, 2006).

In the foregoing typology, the Netherlands tends to share elements of both conservative and social democratic regimes (De Mooij, 2006). The Dutch welfare state took shape in the post-war period when many social security laws were passed and developed into a sufficient system of social security. The Dutch social security system consists of two main parts<sup>1</sup> (De Gier & Ooijens, 2004; De Mooij, 2006). The first part includes several social insurance schemes, such as unemployment insurance and disability insurance, which are meant to replace the income lost to employees who lose their job or become unable to work, either due to physical or mental health problems. Employed people are obliged to contribute to these insurances by paying a percentage of their wages. The second

1 The Dutch systems of social security also includes for example pensions and health care insurance, but given the scope of this dissertation, these are not discussed here.

part consists of different types of social assistance, the most important being welfare services, which are meant to assure people with a minimum income.<sup>2</sup> During the 1970s and the 1980s, the Dutch economy, just as the Western economy in general, faced serious economic crises. Unemployment rates increased considerably, as well as the number of benefit claimants. As a result, the Dutch welfare state became financially unsustainable, and the Dutch government had to reform its labor market policy and system of social security (De Mooij, 2006; Van Ours, 2003). In the course of the 1980s and the 1990s, various policies were implemented to reduce the expenditures of the welfare state by trying to reduce the number, level, and duration of benefits, and by raising employment participation (De Mooij, 2006). Although over the years employment participation increased and unemployment rates decreased, reform of the Dutch welfare state is still ongoing in an effort to keep the system affordable and to account for demographic trends such as the aging of the population (De Gier & Ooijens, 2004). Despite these reforms, the Dutch welfare state still provides those unemployed with a minimum income. With its extensive social redistribution system, the Dutch welfare state remains one of the most highly developed systems in the world (Van Oorschot, 1998).

With its system of social security, the Dutch welfare state aims to provide a relatively strong social safety net for those most vulnerable in society, which might influence the hypothesized relationship between (un)employment and crime. Because the unemployed are entitled to benefits and therefore assured of a minimum income, unemployment might not necessarily become a strong source of financial strain. The assumed detrimental effects of unemployment therefore are expected to be less present in the Netherlands compared to, for example, the US (see also Savolainen, 2009).

Furthermore, it is important to note that the observation period studied in this dissertation, as will be discussed in more detail below, covers the years from 1990 to 2010. During this period, the Dutch economy was recovering from the crises of the 1970s and 1980s. Employment participation steadily increased, and although the unemployment rate peaked to 7.5 percent in 1994 due to economic slowdown (De Gier & Ooijens, 2004; The Netherlands Institute for Social Research, 2005), the unemployment rate showed a downward trend thereafter and fluctuated between 4 and 6 percent during most of the years in which the relationship between employment and crime is examined in this thesis. Studying a vulnerable sample in a timeframe in which the Dutch economy performed relatively well means that the conditions and prospects in the labor market were relatively positive for people with a disadvantaged background. In times of high unemployment rates and tightness in the labor market, especially those low skilled and those with a criminal record, such as the vulnerable youths studied in this dissertation, are less likely to be hired, as employers can easily hire job applicants with better resumes (e.g., Freeman & Rodgers, 1999; Nilsson, Bäckman & Estrada, 2013). The hypothesized effects of a criminal history on

---

2 Minimum income is 70 percent of statutory minimum wage, which in turn is 70 percent of modal wage.

employment chances might thus be less detrimental in this specific time frame under study.

### **The Dutch penal climate**

Besides the different labor market and welfare regimes, the penal climate in the Netherlands differs greatly from that in Anglo-Saxon countries, and especially the US, as well. Whereas the penal climate in the US, with a high incarceration rate and long prison sentences, is very punitive, the Netherlands is characterized by a milder penal climate with relatively short prison spells and a focus on rehabilitation rather than punishment.

On the one hand, because prison sentences in the Netherlands are relatively short in comparison to the US, a spell of incarceration might have a less detrimental effect on the human capital of inmates. In addition, for those inmates serving a longer prison sentence, there are usually opportunities to participate in work programs that enable them to invest in human capital. As a result, a spell of incarceration might therefore affect employment outcomes in the Netherlands to a lesser extent than in the US. On the other hand, since prison sentences are less often imposed in the Netherlands, the stigma might be larger for those individuals that do serve a prison sentence, and as a result, they might experience more difficulties in the labor market.

Furthermore, in the Netherlands, employers cannot access criminal history information because background screening is regulated by the government, while in the US, employers can turn to private companies for criminal history information (Bushway, Briggs, Taxman, Thanner & Van Brakle, 2007; Raphael, 2010). Therefore, Dutch ex-offenders might be less likely to experience difficulties due to their criminal record when applying for a job.

In sum, large differences between societal context, in terms of the decommodification of the welfare regime as well as in terms of the penal climate, may influence the way employment careers and criminal careers are intertwined in the Netherlands and may offer different prospects for vulnerable youths to achieve conventional adult life outcomes.

## **1.3 PRIOR EMPIRICAL RESEARCH**

### **1.3.1 *Studies on the effects of employment on crime***

In the past decades, a steadily growing body of research has emerged on the relationship between (un)employment and crime (see for extensive reviews Bushway & Reuter, 2002; Uggen & Wakefield, 2008). However, a large number of studies examining the effects of unemployment on crime are conducted using macro-level data. These studies often show that crime rates are higher in areas characterized by poverty and high unemployment rates, although there seems to be a stronger association between unemployment and property crimes than between unemployment and non-instrumental crime (e.g., Carmichael & Ward, 2001; Chiricos, 1987; Elliot & Ellingworth, 1996; Raphael & Winter-Ebmer, 2001).

Still, based on these studies, no conclusions about the potential causal effects of (un)employment on offending on the individual level can be drawn.

Studies using individual-level longitudinal data have also established an empirical relation between employment and crime, yet this relation appears to be a complex one. Some studies have demonstrated that young adults committed more crimes during periods of unemployment than when employed (Farrington, Gallagher, Morley, St Ledger & West, 1986; Fergusson, Horwood & Woodward, 2001). Research also showed that being employed was correlated with reduced recidivism rates in samples of ex-offenders (MacKenzie & De Li, 2002; Savolainen, 2009). However, Horney, Osgood, and Marshall (1995) found that work was only weakly related to offending for ex-convicts and even found that the men in their sample committed more property crimes during the months that they were working, perhaps because the workplace provided opportunities for theft. Furthermore, research by Uggen (2000) indicates that the beneficial effects of work may be limited to older offenders, as he found a negative effect of work on crime only for those aged 27 or above.

Finally, other studies suggest that it is not employment per se, but only good, stable employment that can contribute to a decrease in criminal behavior. To illustrate, studies by Uggen (1999) and Wadsworth (2006) have demonstrated that only being employed in higher-quality jobs lowers the chances of offending, whereas being employed in lower-quality jobs did not. Moreover, job stability seems important for desistance from crime (Crutchfield & Pitchford, 1997; Sampson & Laub, 1993; but see Giordano et al., 2002). Although several studies suggest that employment can foster a non-criminal lifestyle, findings from experimental studies evaluating employment programs for ex-offenders generally show rather discouraging results, indicating that employment is not, or only under certain conditions, associated with lower levels of criminal behavior (Bushway & Reuter, 2002; Visher, Winterfield & Coggeshall, 2005).

### 1.3.2 *Studies on the effects of income support on crime*

Since the Dutch welfare state is characterized by a relatively strong social support system, the question can be raised to what extent income support provided to the unemployed affects their engagement in criminal behavior. Although there is research examining the relationship between income support and crime on the macro level, in general showing lower crime rates in areas with more generous income support policies (Baumer & Gustafson, 2007; Burek, 2006; Savage, Bennett & Danner 2008; Savolainen, 2000), there is, besides from a handful of – dated – US studies, hardly any individual-level research conducted in this area. The few available studies, which evaluated transitional aid programs for released prisoners, demonstrated a lower recidivism risk among ex-offenders who received benefits (e.g., Berk & Rauma, 1983; Berk, Lenihan, & Rossi, 1980; Mallar & Thornton, 1978).

### 1.3.3 *Studies on the effects of conviction and incarceration on employment*

Previous research examining the effects of criminal history on employment outcomes points to the negative effects of criminal behavior and the subsequent official reactions, such as a conviction or incarceration, on several occupational outcomes. In general, these studies indicate that crime and its consequences decrease an individual's chance to find work, to experience job stability, and to have good earnings (e.g., Bernburg & Krohn, 2003; Bushway, 1998; Fagan & Freeman, 1999; Pager, 2003; Sampson & Laub, 1993).

Experimental studies, for example, showed that employers are reluctant to employ convicted offenders (Boshier & Johnson, 1974; Schwartz & Skolnick, 1962) and applicants who report a history of incarceration (Pager, 2003; Pager, Western & Sugie, 2009). Furthermore, longitudinal studies have shown that convicted offenders are more likely to experience unemployment (Bernburg & Krohn, 2003) and job instability (Nagin & Waldfogel, 1995). In addition, a spell of incarceration is found to have negative effects on employment probability, job stability, and earnings after release (Fagan & Freeman, 1999; Freeman, 1991; Pettit & Lyons, 2009; Sampson & Laub, 1993; Western & Beckett, 1999; but see Kling, 2006). While most studies thus indicate that conviction and incarceration are associated with difficulties in the labor market, prior research is inconclusive about the extent to which selection effects are at play and whether the negative effects of criminal history found in prior studies are caused by the stigma attached to previously being convicted or incarcerated or by human capital deterioration as a consequence of a spell of confinement.

### 1.3.4 *Studies on adult outcomes of at-risk youths*

Longitudinal studies following at-risk youths well into adulthood are scarce, and existing studies usually focus on outcomes regarding criminal behavior in adulthood (e.g., Piquero, Brame, Mazerolle & Haapanen, 2002; Wartna, Kalidien, Tollenaar & Essers, 2006), while little attention has been paid to outcomes in conventional adult life domains, such as in the labor market (e.g., Bullis & Yovanoff, 2006; Nagin & Waldfogel, 1995; Osgood et al., 2005; Tanner et al., 1999). The few studies that have examined adult outcomes of at-risk youths show that, in general, people with a history of serious behavioral problems or delinquency are more likely to experience difficulties in conventional life domains and that this is especially true for those with a more extensive criminal history (Farrington et al., 2006; Nilsson & Estrada, 2009; Sampson & Laub, 1993). For example, reanalyzing data of one of the key longitudinal studies conducted by Glueck and Glueck (1950; 1968), Sampson and Laub (1993) showed that boys who engaged in juvenile delinquency experienced negative outcomes in conventional domains in adulthood. Juvenile delinquents were more likely than non-delinquent boys to experience job instability in the adult years and at age 32 were less likely to be economically independent.

### 1.3.5 *Gender differences in the relationship between employment and crime?*

Prior studies have almost exclusively focused on the work-crime relationship for males. The few studies that did include women in their samples showed mixed results. To illustrate, studying effects of employment on crime for both men and women using US data, Uggen and Kruttschnitt (1998) demonstrated that employment was associated with a reduction of re-arrest rates for both men and women, while Giordano et al. (2002) found no effect of employment on crime for men nor women.

In addition, research examining the effects of formal reactions to crime on labor market outcomes shows no consensus about whether formal sanctions negatively affect women's employment outcomes (Davies & Tanner, 2003; LaLonde & Cho, 2008; Lanctôt, Cernkovich & Giordano, 2007). Moreover, very little is known about the existence of gender differences in long-term outcomes of men and women with a vulnerable background, but there are indications that convicted women end up in a poorer welfare situation in adulthood than convicted men (Nilsson & Estrada, 2009; Nilsson et al., 2013).

In sum, as of yet, too few studies have compared men and women to draw final conclusions about possible gender differences in the relationship between employment and crime. Moreover, hardly any research followed at-risk men as well as women long enough to study possible gender differences in outcomes in adult life domains.

### 1.3.6 *The relationship between employment and crime in the Netherlands*

The field of research examining the relationship between (un)employment and crime is dominated by studies carried out in Anglo-Saxon countries. It is unknown to what extent results from studies using Anglo-Saxon data can be generalized to Western-European countries such as the Netherlands (see also Savolainen, 2009). In the Netherlands, the association between (un)employment and crime received attention from the 1970s onward, with studies examining aspects of the work-crime relationship using macro-level, cross-sectional, experimental, and qualitative data (e.g., Jongman, 1982; Jongman, Weerman & Kroes, 1993; Miedema, 1997; Van Tulder, 1985). Overall, Dutch studies point to beneficial effects of employment on crime and detrimental effects of criminal history on employment outcomes. For example, using cross-sectional data, Jongman (1982) demonstrated that among unemployed men, there was a considerable higher proportion having an arrest record than among employed men. Moreover, this difference became larger as the unemployment rate increased during the crisis years, indicating that unemployment might motivate people to engage in criminal behavior (Jongman et al., 1993). In addition, the negative effects of a criminal history were demonstrated by a Dutch experiment, showing that application letters in which a conviction was mentioned received significantly less positive responses from employers than applications without a reference to a criminal record (Buikhuisen & Dijksterhuis, 1971).



One of the few Dutch individual-level longitudinal studies addressing the work-crime relationship was conducted by Van der Geest (2011). Studying a sample of high-risk men – the male subjects from the sample that is studied in this thesis – the study demonstrated, distinguishing between offender groups using trajectory analysis, an instantaneous negative effect of work on crime, over and above a selection effect, in the different groups (Van der Geest, Bijleveld & Blokland, 2011). In addition, he studied the effects of incarceration for these high-risk men based on their level of employment participation. Only a short-term negative effect of incarceration on employment participation was found in the group that showed normative levels of employment, as opposed to groups showing low or no employment participation (Van der Geest, Bijleveld, Blokland & Nagin, forthcoming). However, as Van der Geest studied a male sample, his study does not provide insight into the work-crime relationship at the individual level for women. Moreover, by also looking at the role of income support on offending, as well as the role of employment and crime in shaping outcomes in other adult life domains, the current study builds upon the research by Van der Geest (2011).

### 1.3.7 *Limitations of previous studies*

Although there is a growing body of research on different aspects of the relationship between crime and employment, the existing research still has its limitations. To begin with, studies using cross-sectional data or research examining the relationship between (un)employment and crime on the macro level does not allow us to draw conclusions about time order and the causality of the relationship between employment and crime on the individual level. For this, we need individual-level longitudinal studies. However, individual-level longitudinal studies are very expensive to conduct, and, given that respondents age at the same pace as their researchers, it takes years to collect data spanning the adolescent to the adult years. As a result, the existing longitudinal studies either include a relatively short follow-up period (e.g., Horney et al., 1995; Uggen, 2000) or study relatively 'old' cohorts that have been under continued study for an extended period of time, or have otherwise previously been subject to research, and who came of age in a very different historical context (e.g., West & Farrington, 1973; Glueck & Glueck, 1950; 1968; Sampson & Laub, 1993).

In addition, prior research is inconclusive about the mechanisms that are at play in the work-crime relationship. It is therefore unclear whether theories that assume that the financial benefits associated with being employed or theories focusing on the control aspect of employment are better suited to explain the effects of employment on crime. Furthermore, it is largely unknown to what extent labeling or human capital explanations are responsible for the observed relationship between criminal history and negative employment outcomes. Moreover, given that there are both theoretical and empirical indications that at least part of the relationship between employment and crime is spurious (e.g., Paternoster et al., 2003), an important shortcoming of prior research is that these studies were not always able to very well account for selection effects.

Finally, previous individual-level studies have only rarely included women in their samples (Giordano et al., 2002; Uggen & Kruttschnitt, 1998) and were almost exclusively carried out in Anglo-Saxon countries, potentially limiting the generality of their findings. In sum, although prior research greatly enhanced our understanding of the work-crime relationship, several important theoretical issues remain unresolved, and available results have been too inconclusive to draw general conclusions about the work-crime relationship, especially with regard to women, and in sociocultural contexts outside Anglo-Saxon countries.

#### 1.4 THE CURRENT STUDY

##### 1.4.1 *Research questions and hypotheses*

As outlined above, prior research on the relationship between employment and crime has its limitations. This study is an effort to contribute to the existing body of literature by addressing several shortcomings that plagued previous studies. This thesis provides insight into the role of employment and crime in the (adult) lives of previously institutionalized youths. The aim of this thesis is threefold: (1) to examine the effect of employment on offending, (2) to examine the effects of conviction and incarceration on employment chances, and (3) to examine the extent to which employment and crime influence adult life adjustment. To do so, a sample of previously institutionalized males and females who were followed into their thirties is studied. The research questions that are addressed and the hypotheses that are tested in the four empirical chapters are described in more detail below.

Chapters 2 and 3 focus on the effects of employment on crime, and also address the role of income support. The first two research questions of chapter 2 are descriptive: (1) *How does the criminal career of high-risk young adults develop?* (2) *How does the employment career of high-risk young adults develop?* After describing the development of the criminal careers and the employment careers of high-risk men and women, the effects of employment and unemployment on offending are tested, guided by the following research questions: (3) *To what extent does employment affect the criminal career?* Based on theories that assume employment to have a causal, direct effect on offending, it is expected that, over and above the effects of stable personal and background characteristics, being employed decreases the number of convictions. (4) *To what extent is there an additional effect of employment duration?* Following Sampson and Laub's theory of informal social control, it is expected that, when high-risk young adults are employed for multiple consecutive years, their conviction frequency further decreases. An additional negative effect of employment duration on offending would provide support for the importance of informal social control, which takes time to establish, in altering the criminal career. (5) *What is the effect of unemployment duration on the criminal career development of high-risk young adults?* Based on research showing detrimental psychosocial consequences of unemployment, it is expected that, as high-risk young adults are unemployed several



consecutive years, their conviction frequency increases. Answers to these research questions provide insight in whether a causal relationship, rather than a spurious relationship, between employment and offending exists.

Chapter 3 takes a different approach to study the relationship between employment and crime by examining the effects of both employment and income support on offending. By looking at both effects of employment and income support on crime, the extent to which it is the income, or the non-monetary aspects of employment that contribute to reduced offending, is examined. The research questions that are answered in chapter 3 are as follows: (1) *What are the effects of employment and income support on serious offending?* Two hypotheses are tested with this research question. On the one hand, based on strain theories that emphasize the financial motivation for crime, both employment and income support are expected to reduce offending, since they are both a source of legitimate income. On the other hand, following theories which emphasize the importance of the informal social control associated with being employed, employment should reduce offending more so than income support. (2) *Are there different effects of income support on serious offending, depending on the source of support?* Three types of income support are distinguished: unemployment insurance, public assistance, and disability benefits. Following theories that stress the importance of financial motivation for crime, and given that of these three types of income support public assistance yields the lowest monetary benefits, the effects of unemployment insurance and disability benefits on crime are expected to be the most pronounced. (3) *Do the effects of employment and income support differ for property crime versus violent crime?* This research question tests two competing hypotheses. Based on strain theories, employment and income support should have stronger effects on property than on violent offending. However, in line with control theories, it is assumed that employment and income support would have an equally strong effect on both property and violent offending but that since employment provides control and income support does not, the effect of employment compared to income support on both types of crimes is stronger. Since existing theory does not give rise to clear predictions about the existence of gender differences in the effects of employment and income support on crime, the last research question of chapter 3 is more exploratory in nature: (4) *Do the effects of employment and income support differ for vulnerable young men versus vulnerable young women?*

After examining the potential effects of work on crime, chapter 4 takes the opposite perspective and focuses on the effects of crime on employment, thereby addressing the second aim of this dissertation. The following research questions were addressed separately for at-risk men and women: (1) *What is the effect of a history of unemployment on the probability of employment?* Two hypotheses are tested with the first research question. To begin with, following signaling theory, unemployment and the number of unemployment spells in particular are thought to decrease the likelihood of future employment. In addition, following human capital theory, it is expected that the duration of unemployment further decreases employment probability, since it is assumed that it takes some time for human capital to deteriorate. (2) *What is the effect of a conviction on the*

*probability of employment?* Convictions are assumed to reduce the probability of employment due to labeling effects, because of which a convicted person is less likely to be hired. (3) *What is the effect of incarceration, over and above the effect of a conviction, on the probability of employment?* Similar as to conviction, incarceration is assumed to bring about labeling effects, which however may surpass those generated by a mere conviction in strength. Incarceration is therefore assumed to reduce the chance of employment over and above the potentially negative effects of a conviction. In addition, as prison stays increase in length, employment chances are expected to further diminish due to human capital deterioration. (4) *What is the effect of a conviction and incarceration, over and above the effect of prior unemployment on the probability of employment?* The final research question addressed in chapter 4 examines the relative importance of unemployment history and criminal history for the employment chances of at-risk youths who, due to their vulnerable background, may have limited prospects on the labor market to begin with.

Following the third aim of this thesis, the final empirical chapter focuses on the adult outcomes of formerly institutionalized youths and the extent to which employment and crime influence their level of adult life adjustment. The first research question addressed in chapter 5 is descriptive: (1) *What is the level of adjustment in conventional adult life domains of men and women formerly institutionalized in a juvenile justice facility?* After describing how formerly institutionalized youths are faring in adult life domains, predictors for adult life adjustment are examined, following three research questions: (2) *To what extent do personal and childhood characteristics of formerly institutionalized men and women predict their level of adult life adjustment?* (3) *To what extent does criminal behavior of formerly institutionalized men and women, over and above personal and childhood characteristics, predict their level of adult life adjustment?* And (4) *To what extent does employment history of formerly institutionalized men and women predict their level of adult life adjustment, when personal and childhood characteristics and criminal history are taken into account?* Answers to these questions can shed light on the degree to which adult life adjustment is explained by stable individual characteristics, as stated by Gottfredson and Hirschi (1990), or whether events in young adulthood, namely, criminal behavior and employment, influence adult outcomes as well, as is assumed by Sampson and Laub (1993).

#### 1.4.2 Contributions of the current study

By addressing the research questions outlined above, this study contributes to the existing body of literature in the following ways. First, central to this dissertation is the study of a vulnerable group of previously institutionalized youths. Research on at-risk groups is much needed. Due to their background, characterized by an adverse family environment, psychological and behavioral problems, delinquency, institutionalization, and a criminal record, vulnerable youths can face serious challenges on the road to adulthood. Failing to make a successful transition into adulthood and adapt to adult social roles, such as employment, can seriously compromise their adult life success and contribute

to a persistent pattern of criminal behavior. However, focusing on the work-crime relationship in a high-risk sample means that one must bear in mind that caution is warranted when generalizing the findings to other groups.

Second, this study uses individual-level longitudinal data on a sample of high-risk youths followed into their thirties. Although the number of individual-level longitudinal studies examining the work-crime relationship is increasing, existing studies usually have short-term follow-up periods. Studying the long-term development of at-risk youths, covering the years in which they transition into adulthood, is crucial for understanding the ways in which their criminal career and employment career progress, and to what extent these careers shape – and are shaped by – important events and transitions in either of them. By including statistical controls for possible selection effects in the analyses of the individual longitudinal data, this dissertation takes the possibility into account that the relationship between employment and crime is spurious rather than causal, as argued by Gottfredson and Hirschi (1990). Previous research was not always able to control for selection effects, sometimes because of insufficient data but also because statistical techniques that are able to adequately account for (unobserved) heterogeneity were unavailable until recently.

Third, the sample for this study comprises both males and females. Since prior research mostly focuses on males and theories on the relationship between employment and crime seem by default fitted to explain the mutual influences of employment and crime in males only, it is unclear to what extent these theories also apply to women and to what extent there are gender differences in the relationship between employment and crime.

Fourth, whereas important prior longitudinal research on the work-crime relationship, such as the Unraveling Juvenile Delinquency study by Glueck and Glueck (1950; 1968) and the Cambridge Study in Delinquent Development by West and Farrington (1973), studied older cohorts, the sample under study is a contemporaneous sample. In recent decades, the labor market has undergone substantial changes, most notably a decreasing demand of unskilled labor and increasing employment participation among women (De Beer, 2005). By studying a contemporary sample of men and women, this dissertation tests the generalizability of the mechanisms theorized to be governing the work-crime relationship to the current era.

Fifth, this study was carried out in the Dutch context, while most research on the relationship between (un)employment and crime was carried out in Anglo-Saxon countries, mainly in the US. Anglo-Saxon countries are characterized by a very different labor market and system of social security, as well as a different penal climate. Results from the current study will speak on the extent to which results from prior empirical studies, and the theories developed to explain those findings, can be generalized to Western European countries such as the Netherlands.

In sum, this study contributes to the existing body of literature, by examining the relationship between crime and employment on the individual level in a Dutch contemporaneous sample of high-risk men and women, who were followed well into their thirties. This study does not only have theoretical and

empirical relevance, but its results can also yield important implications for policy and practice. More knowledge about the relationship between employment and crime in vulnerable groups, and on the ways we can prevent vulnerable youths from failing to make a successful transition to adulthood, is of great importance, for at least three reasons. First, it is because young people with a vulnerable background are at risk of experiencing adverse outcomes in multiple domains, which can have serious consequences for their well-being later in life. Second, because when vulnerable youths fail to make a successful transition to adulthood, they can impose major costs on society, not only in terms of the costs of their criminal behavior but also in terms of unemployment, social security, and health-care services (Caspi & Moffitt, 1995; Piquero et al., 2013). And third, as opposed to other important life domains, employment is relatively easy to manipulate (e.g., via work programs for at-risk groups or offenders) and therefore a suitable starting point for intervention and reintegration programs.

## 1.5 DATASET: THE 17Up STUDY

This dissertation uses data from the NSCR 17Up study, a longitudinal study following vulnerable youths well into adulthood. The 17Up study was realized in multiple stages. The male subjects of the 17Up study were originally sampled to serve as a control group for a sample of juvenile sex offenders that were institutionalized and received treatment in a juvenile justice institution in the Netherlands. In order to compare outcomes of juvenile sex offenders with high-risk, non-sex offenders, a sample of boys from the same juvenile justice institution was selected. Later, to be able to compare high-risk boys with high-risk girls, a sample of female subjects from that same institution was selected.

For conducting the 17Up study, formal consent was obtained from the Dutch Ministry of Security and Justice. Ethical approval was obtained from the Ethics Committee of the Faculty of Law ('Commissie Ethiek van Rechtswetenschap-pelijk en Criminologisch Onderzoek', CERCO) of VU University.

The 17-up study consists of two parts. Data from part 1 of the study are used in chapters 2, 3, and 4, and data of part 2 of the study are used in chapter 5 (see Figure 1.1 for an overview of the data used in this dissertation). Information about the two parts of the study, the sample, the data collection, and the data used in this dissertation is described in detail below.

### 1.5.1 *Sample of the 17Up study: Part I*

The sample of the first part of the 17Up study comprises of 270 boys and 270 girls who were institutionalized in a Dutch judicial treatment institution for juveniles in the 1990s. All boys that had been discharged from the institution between January 1989 and June 1996 were selected. Given that each year less girls were institutionalized in the treatment center, to achieve a similar

sample size, all girls discharged between January 1990 and March 1999 were sampled.<sup>3</sup>

These boys and girls were institutionalized because they showed serious behavioral problems, such as aggression, truancy, running away from home, and delinquency, for which they needed treatment. In the Netherlands, until recently, treatment in a judicial treatment institution could be imposed by a juvenile court magistrate either on a civil-law measure or a criminal-law measure. A civil-law measure could be imposed when a child was under 18 years old and it was impossible for a child to remain at home, for example, because of behavioral problems and an adverse family situation. A criminal-law measure can be imposed when a juvenile has committed an offense and is aged between 12 and 18.

In this sample, the majority of boys and girls received treatment in the institution based on a civil-law measure; 56 boys (19.6%) and seven girls (2.6%) were treated based on a criminal-law measure. As opposed to juveniles institutionalized based on a criminal-law measure, those institutionalized based on a civil-law measure were not (necessarily) convicted of a crime. However, the latter were more often than not engaged in delinquency. Nevertheless, because delinquent behavior was usually only one of the problematic behaviors, juvenile court magistrates could decide to impose treatment on a civil-law rather than a criminal-law measure. Furthermore, youths institutionalized based on a civil-law and criminal-law measure are very similar in terms of personal and background characteristics and psychological and behavioral problems (Boendermaker, 1999; Hamerlynck et al., 2009; Wijkman, Van der Geest & Bijleveld, 2006). Due to the nature of their problem behavior, these youths were all considered to benefit from treatment in a closed setting. The sample of the 17Up study consists thus of a relatively homogenous group of fairly seriously troubled juveniles and can be considered to be comparable to other contemporaneous samples of incarcerated juveniles outside of the Netherlands (e.g., Giordano, Cernkovich, & Rudolph, 2002). The majority of this sample is ethnically Dutch (59.3%). A minority is of Surinamese, Moroccan, Turkish, or Antillean descent (together 15%) or of other (10%) or mixed decent (15%).

During their stay in the institution, all youths received treatment, which was aimed at reducing the juveniles' problematic and delinquent behavior, as well as providing them with education. The boys stayed in the institution for 20 months on average (SD 12 months, median 20 months) and were 17 years and four months old on average (SD 15 months) when they were discharged. The girls stayed in the institution for 13 months on average (SD eight months, median 12 months) and were 16 years and seven months old on average (SD 15 months)

---

3 Sampling of the female subjects was conducted in two stages: first 148 girls were sampled, and later an additional 122 girls were sampled. The author coordinated the sampling procedure and the data collection of the second part of the female sample. The data collection was carried out with the assistance of students, and the author was involved in the coding of the treatment files, and collecting the data on criminal convictions and incarceration, as well as on employment and income support.

when they were discharged. For chapters 2, 3 and 4, using official registers, the criminal and employment careers of these 540 boys and girls were reconstructed from ages 18 up to age 32, which comes down to a follow-up period of 15 years.

### 1.5.2 *Data of the 17Up study: Part I*

In part I of the 17Up study, data on the following domains were collected and thus are available for all 540 men and women in the original 17Up sample.

*Personal and background characteristics.* During the juveniles' stay in the institution, treatment files were constructed by a multi-disciplinary team. These files contain, for example, psychological and psychiatric reports, reports from the Dutch Child Protection Board, and treatment evaluations. Standardized and validated instruments, such as the Wechsler Intelligence Scale for Children-Revised, Child Behavior Checklist, Amsterdam Biographical Questionnaire for Children, Adolescent Temperament Questionnaire and Dutch Personality Questionnaire-Junior, were used to construct reports about respondents. The treatment files contain a wealth of information on the juveniles' personal and background characteristics. A structured coding instrument, developed by Hendriks and Bijleveld (2004), was used to score information from the treatment files. Information on the following personal and background characteristics is used in different chapters of this dissertation: intelligence, level of education before treatment in the institution, aggression, impulsiveness, problems with authority, social skills, victimization of neglect, physical or sexual abuse, alcohol abuse in the family, substance abuse in the family, a parent with psychopathology, the presence of criminal family members, and unemployment in the family.

*Conviction.* Information on offending is based on convictions registered in the judicial documentation abstracts of the Netherlands Ministry of Security and Justice. These abstracts contain information on every case that is registered at the public prosecutor's office and the ensuing verdict. Information about the type of offense and offense date is available. These abstracts contain information on all offenses that are registered at the public prosecutor's office, as well as information on whether the case resulted in a conviction. Information about the type of offense, offense date, and conviction date is available. Because the offense date was not registered before 1995, missing offense dates were imputed with estimates based on the date of the conviction.

Offenses are classified according to the standard classification for offenses in the Netherlands (Statistics Netherlands, 2000). Following Van der Geest (2011), this dissertation focuses on *serious* offending, given that a high-risk sample is central to this thesis, and minor offenses such as traffic offenses are not uncommon in the general population. Serious offending consists of violent offenses, property offenses, serious public offenses, drug offenses, and weapon-related offenses (Loeber, Farrington & Waschbusch, 1998).

*Incarceration.* Information on incarceration was acquired differently for men and women, as a result of different types of permission to access data sources



in different phases of the data collection. For the men, information on incarceration was retrieved from the Judicial Penitentiary files of the Ministry of Security and Justice. These files contain information on a person's incarceration history, including dates of entry and release. When the penitentiary file could not be accessed, incarceration information was complemented with information on imposed unconditional prison sentences as registered on the judicial documentation abstracts.

For the women, information on incarceration was obtained via the department of the Ministry of Security and Justice ('Dienst Justitiële Inrichtingen') that manages the Dutch prison registration system ('TULP'). This system contains information on dates of entry and release from all penitentiaries in the Netherlands. Although different data sources were used to gather information on incarceration for men and women, both sources provide accurate information about when and for how long a person was incarcerated.

*Employment and income support.* Employment and income support data were collected from Suwinet, the national database of the Ministry of Social Affairs and Employment in the Netherlands. The Suwinet database contains information about (official labor market) employment and social security benefits at the individual level from 1992 onward. In this database, the start date and end date of a job, as well as of all types of income support, are registered. In addition to Suwinet, the trade register managed by the Netherlands Chamber of Commerce was accessed. This trade register contains historical information about business ownership. The period someone had a business of their own was coded as being employed.

Although in the Suwinet database all official employment contracts are registered, we lack information on informal work, as well as on the type of job and whether someone was part-time or full-time employed. As the database became fully computerized from 1998 onward, employment participation rates before that time may underestimate actual employment levels; however, this underestimation is non-systematic.

*Marriage and parenthood.* Besides (un)employment, marriage and parenthood are two other important 'social institutions' that are thought to influence the criminal career (Sampson & Laub 1993; for a review, see Blokland & Nieuwbeerta 2010). Therefore, control variables for marriage and parenthood are included in the analyses in chapters 2 and 3, to examine effects of (un)employment and income support over and above the effects of marriage and parenthood. Information about marriage and parenthood was collected from the Dutch Municipal Population Register ('Gemeentelijke Basisadministratie Persoonsgegevens').

### 1.5.3 *Sample of the 17Up study: Part II*

In the second phase of the 17Up study, face-to-face interviews were conducted with a subsample of the original sample of 540 boys and girls (see also

Van der Geest, Bijleveld & Verbuggen, 2013).<sup>4</sup> At the start of the interview phase of the study, 22 subjects (4.1%) from the original 540 boys and girls had died. This death rate is, given that subjects are only in their thirties, relatively high. In addition, 14 subjects had emigrated, and five subjects were living in institutions, such as a psychiatric institution or a forensic clinic, that refused to collaborate with the study. Therefore, another 19 subjects could not be approached by the research team. This left 499 men and women that could be approached for the interview. Out of these 499 respondents, 118 men and 133 women participated in the interview study, resulting in a 50.3 percent response rate.

A response analysis was conducted, to compare those who participated in the study with those who could not be approached or refused to participate. Groups were compared on a number of personal and background characteristics, living situation, employment, marital status, and criminal behavior. Besides subjects without regular dwelling or place of stay being under-represented in the subsample, responders and non-responders did not differ significantly on the other characteristics (Van der Geest, Bijleveld & Verbruggen, 2013). We therefore consider the subsample under study representative of the original sample.

The face-to-face interviews were conducted between July 2010 and January 2012. At the time of the interview, men were 36.8 years old (SD 2.4) on average, and women were 32.9 (SD 2.5) years old. On average, respondents were interviewed over 17 years after they left the institution (17.7 years, SD 2.8). The average follow-up period is 19.4 years (SD 2.3) for men and 16.3 years (SD 2.3) for women. The boys left the institution somewhat earlier in the 1990s than the girls; therefore, the follow-up period for men is longer than it is for women. This subsample of 251 men and women is studied in chapter 5 of this dissertation.

#### 1.5.4 *Data of the 17Up study: Part II*

In addition to the data mentioned above, which were collected for all 540 subjects of the original sample, additional data for the subsample comprising 251 subjects were collected in part II of the 17Up study. In this second part of the study, face-to-face interviews were conducted, in which questions were asked on a wide array of topics using structured and semi-structured questionnaires. Respondents were also asked to fill in a life history calendar. Information gathered during these interviews on employment history and adult outcomes in multiple life domains is used for this dissertation.

*Employment history.* Information about employment history was collected during the interviews using a life history calendar. This is a structured instrument for gathering more reliable retrospective information about the occurrence and timing of important life events over the life course. By visualizing the life course, and by relating different life events to one another, the life history calendar facilitates recall of the occurrence and timing of events and transitions in

---

4 The author was involved in the follow-up interview study, as part of the research team that designed and conducted the interview study.



different life-course domains (Freedman, Thornton, Camburn, Alwin & Young-DeMarco, 1988; Roberts & Horney, 2010). Respondents reported on the life history calendar for each age year whether they were employed. For this study, using information on formal employment (temporary work, regular work, or business ownership) in the years from age 18 to one year prior to the interview, an average measure of employment was constructed.

*Adult life domains.* In the face-to-face interviews, information was collected about the following life domains: housing situation, employment, intimate relationships, children, health, alcohol use, drug use, and self-reported crime. For this dissertation, the following information, pertaining to the situation in the 12 months prior to the interview, is used. With regard to accommodation situation, subjects were asked whether they lived in a regular house, as opposed to being homeless or living in an institution or detention center. In addition, subjects reported on whether they had a job and whether they were in an intimate relationship. Furthermore, subjects were asked whether they had children and, if so, how often they had contact with their child(ren). Questions derived from the Dutch Health Monitor (GGD, 2005) were used to ask respondents about their physical and mental health and use of health-care services. Items derived from the Composite International Diagnostic Interview (CIDI) were used to ask subjects about alcohol and drug (ab)use. Finally, using items from the International Self-Report Delinquency scale (ISRD), respondents reported on whether they had committed one or more offenses in the past 12 months. With information on these life domains, an average measure of 'adult life adjustment' at the time of the follow-up interview was constructed.

## 1.6 STRUCTURE OF THE DISSERTATION

This dissertation focuses on the role of employment and crime in the adult lives of previously institutionalized youths. It examines the relationship between the criminal career and employment career in a sample of previously institutionalized adults characterized by a vulnerable background rendering them at high risk of both failure to successfully transition into adult roles and of developing persistent patterns of criminal behavior. In addition, adjustment in adult life domains when these adults are well into their thirties is studied. The goal of this research is threefold: (1) to examine the effect of employment on offending, (2) to examine the effects of conviction and incarceration on employment chances, and (3) to examine the extent to which employment and crime influence adult life adjustment. The organization of this dissertation is as follows.

Chapter 2 describes the criminal careers and employment careers of high-risk men and women. Furthermore, effects of employment, employment duration, and unemployment duration on serious offending are examined while controlling for stable and dynamic control variables.

Chapter 3 investigates effects of employment and different types of income support on serious offending, property offending, and violent offending. By looking at both effects of employment and income support and by distinguishing

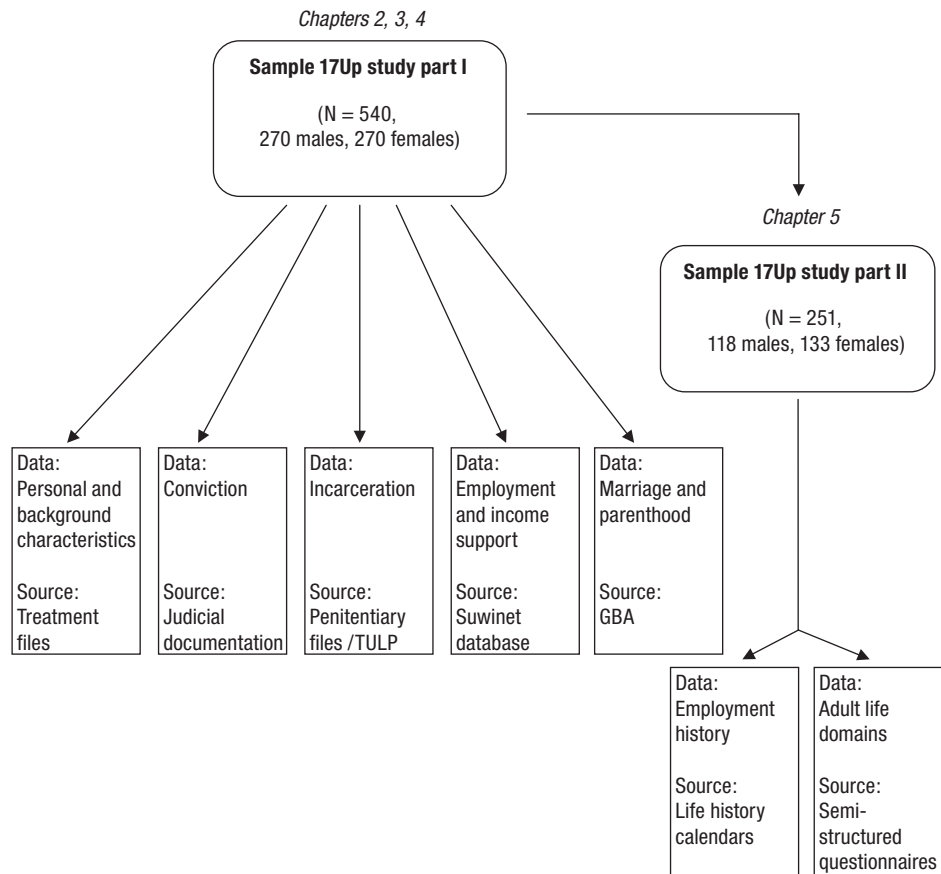
between different types of offending, the extent to which income or other non-monetary aspects of employment are important in reducing offending can be examined.

Whereas chapters 2 and 3 focus on effects of employment on crime, chapter 4 examines effects of formal sanctions to crime, conviction, and incarceration, on employment. Since the employment prospects of vulnerable youths are already limited, this chapter examines to what extent conviction and incarceration, in addition to unemployment history, affect their employment prospects.

Chapter 5 describes the adult outcomes of formerly institutionalized youths when they are well into their thirties, in the labor market, but also in other important adult life domains such as family formation and health. Furthermore, this chapter examines the extent to which adult life adjustment is predicted by individual characteristics, criminal behavior, and employment history.

In chapter 6, the results of the different chapters are summarized, and implications for theory are discussed. This dissertation closes with implications for policy and practice and directions for future research.

**Figure 1.1 Overview of the data used in this dissertation**



## EFFECTS OF EMPLOYMENT AND UNEMPLOYMENT ON SERIOUS OFFENDING IN A HIGH-RISK SAMPLE OF MEN AND WOMEN FROM AGES 18 TO 32 IN THE NETHERLANDS<sup>1</sup>

### Abstract

*Using longitudinal data on the criminal careers of a group of high-risk men and women (N=540) who were institutionalized in a Dutch juvenile justice institution in the 1990s, this article addresses the effects of (un)employment on crime. Results show that, for both men and women, employment rates are below average and stability in employment is low. Nevertheless, random effects models consistently show employment to reduce the estimated number of convictions for both men and women. Employment duration has an additional effect on crime, but only for men. Unemployment duration increases the estimated number of convictions for women, while slightly decreasing them for men.*

### 2.1 INTRODUCTION

In life-course criminology, transitions into adult roles such as employment, marriage, or parenthood are considered to be of great importance in the process of desistance from crime (Laub & Sampson, 2003; Sampson & Laub, 1993). Transitions can lead to an increased embeddedness in conventional society, stimulate maturity, responsibility, or a change in identity. Entering a (steady) job is considered one of the most important transitions. Getting a job not only provides a source of income but is also associated with numerous other factors that promote desistance. The majority of juveniles make a successful transition to adulthood. However, juveniles with problematic backgrounds, who are vulnerable in terms of low levels of education, problematic personality characteristics, negative environmental influences, and delinquent behavior during adolescence, may face difficulties in adapting to conventional adult roles (Osgood

1 This chapter was published as: Verbruggen, J., Blokland, A. & Van der Geest, V. (2012). Effects of employment and unemployment on serious offending in a high-risk sample of men and women from ages 18 to 32 in the Netherlands. *British Journal of Criminology*, 52(5), 845-869. Doi: 10.1093/bjc/azs023.

et al., 2005). These risk factors may increase their likelihood of developing a persistent pattern of criminal behavior (Moffitt & Caspi, 2001) as well as putting them at risk of becoming chronically unemployed (Wolbers, 2000). For these at-risk groups, making the transition to steady employment therefore seems especially important.

Over the last few decades, the transition to adulthood has become more challenging for all youths (Arnett, 2004) and, given increasing educational demands and decreasing want for unskilled labor, especially for youths from vulnerable populations (Osgood et al., 2005). How many of these high-risk youths succeed in making the transition to steady employment? Does making this transition keep them from offending? And, to what extent does long-term unemployment serve as a catalyst for developing a persistent criminal career? Since much effort is aimed at providing employment opportunities for at-risk young adults, answers to these questions are highly relevant to both policy makers and practitioners working with young adults in the criminal justice system.

Using longitudinal data on a sample of high-risk men and women with troubled backgrounds, who were all treated in a juvenile justice institution in the Netherlands in the early 1990s, this study investigates the role of employment and unemployment in the development of crime. The study combines validated information on personal and background risk factors derived from treatment files with a relatively long follow-up, in most cases up to age 32. Detailed longitudinal data on employment, offending, and incarceration were retrieved from official registers in the Netherlands. This study answers the following research questions. First, how does the criminal career of high-risk young adults develop? Second, how does the employment career of high-risk young adults develop? Third, to what extent does employment affect the criminal career? Fourth, to what extent is there an additional effect of employment duration? And, finally, what is the effect of unemployment duration on the criminal career development of high-risk young adults?

## 2.2 THEORY

Several criminological theories argue employment to have a dampening effect on crime and claim that effect to be either instantaneous or gradual. First, employment generates income, which could instantaneously decrease the motivation for acquisitive crime (Agnew, 2001; 2006). Other theories emphasize that work directly increases social control from a boss or co-workers and more generally structures everyday life, thereby decreasing time for unstructured (leisure) activities that are associated with committing crimes (Cohen & Felson, 1979; Jahoda, 1982; Laub & Sampson, 2003).

The effects of employment may also be more gradual. Steady employment is argued to increasingly yield social capital, progressively tightening the bond to conventional society (Coleman, 1988; Laub & Sampson, 2003). Continued employment also gradually increases the identification with a non-criminal lifestyle and intensifies feelings of competence, usefulness, and satisfaction

(Crutchfield & Pitchford, 1997; Jahoda, 1982; Maruna, 2001; Pugliesi, 1995; Thoits, 1986). Over time, employment becomes more than just a source of income, raising the stakes of committing crime and therefore gradually increasing its deterrent effects. As these processes take time to gain momentum, not only work per se but rather the duration of employment might be important in understanding the link between employment and reduced offending.

Conversely, those who go through elongated spells of unemployment generally experience decreased well-being and feelings of inferiority and increasingly suffer from the stigma associated with being unemployed (Kulik, 2000; McKee-Ryan et al., 2005; Paul & Moser, 2009). As their distance to the labor market increases due to processes of signaling and scarring (De Witte, 1993; Luijckx & Wolbers, 2009; Spence, 1973), disadvantage starts to cumulate for those long-termed unemployed (Sampson & Laub, 1997), gradually increasing their chances of committing crime.

Whether instantaneous or gradual – or both – the above theories assume employment to have an independent causal effect on crime. Other theories, however, state that there is no causal relationship between (un)employment and crime. Instead, these theories argue that any observed relationship between (un)employment and crime is spurious and entirely due to a selection effect (Gottfredson & Hirschi, 1990). According to these theories, stable individual characteristics simultaneously affect the likelihood of criminal behavior as well as success in other life domains, such as finding and keeping a job. Gottfredson and Hirschi's (1990) self-control theory, for example, asserts that people with low levels of self-control are at elevated risk of committing crimes as well as less likely to be employed. To shed light on this theoretical discord, longitudinal data and analytical techniques that can control for stable between-individual differences are needed to allow for distinguishing selection effects from causal effects of (un)employment on crime.

As yet, it is unclear to what extent the above-mentioned theories apply to the relationship between employment status and crime in a contemporaneous high-risk sample. Empirically, the relationship between employment status and crime appears to be complex, and this might be even more so for vulnerable populations, like high-risk young adults. Moffitt (1993; 2006), for example, states that young adults with multi-problem backgrounds are able to enter the job market but that their neuropsychological dysfunction prevents them from successfully adapting to their newly acquired pro-social contexts. For these high-risk young adults – Moffitt's life-course-persistent offenders – employment would mainly lead to a shift toward other types of rule-breaking behavior, instead of an overall decrease in criminal behavior (Moffitt, 1994).

### 2.2.1 *Gender differences in effects of employment and unemployment on crime*

There also is no theoretical or empirical consensus on whether the effects of employment or unemployment on crime are different for men and women. It could be argued that employment is more strongly linked to crime for men, since, given that men still more often are breadwinners (Statistics Netherlands,

2010), on average, men have more at stake by committing crime than have women. Research also suggests that a (steady) job is an important part of the masculine identity (Jahoda, 1982; McFayden, 1995) and that the psychosocial meaning of work might be less for women (Harding & Sewel, 1992; Rossi, 1998). Finally, unemployed men are stigmatized more strongly and experience greater negative psychological effects of unemployment than do women (Kulik, 2000; Paul & Moser, 2009). In addition, unemployed women might more easily have access to other accepted adult social roles, such as the role of mother, which – like work – provide both social control and structure in everyday life (Paul & Moser, 2009). However, unemployed women who have to take care of their child(ren) alone may be more likely to have financial problems, which might motivate them to commit income-generating crime. Taken together, it can be hypothesized that the beneficial effects of employment for men are larger compared to those for women and that the detrimental effects of long-term unemployment are more severe for men as well.

However, nowadays, the difference in employment participation between men and women is becoming increasingly smaller (Van der Valk & Boelens, 2004), and, therefore, it seems that the meaning men and women attach to work is becoming more and more similar (Hult, 2008; Nordenmark, 1999). This implies that, in a contemporaneous sample like ours, employment and unemployment might have similar effects for both men and women. Furthermore, in a high-risk sample, both men and women are more likely to hold low-quality jobs, and therefore employment can be expected to be less effective in reducing crime for both men and women.

### 2.3 PRIOR RESEARCH

The majority of the research on the relationship between employment and reduced offending relies on cross-sectional data. Results of such studies do not allow us to make inferences about the possible causality of the relationship (for extensive reviews on research examining the relationship between employment and crime, see Bushway & Reuter, 2002; Uggen & Wakefield, 2008). The effects of unemployment on crime, on the other hand, are studied longitudinally mostly at the macro level (e.g., Box & Hale, 1984; Carmichael & Ward, 2001; Chiricos, 1987; Elliott & Ellingworth, 1996; Hale & Sabbagh, 1991). Macro-level studies provide little information about the relationship between unemployment and crime on an individual level. Longitudinal studies that do examine the relationship between (un)employment and crime using individual-level data are scarce and, thus far, show mixed results that preclude drawing more general conclusions (Uggen & Wakefield, 2008).

A number of factors seem important in our understanding of the link between employment and crime. First, the effects of employment on crime appear to differ across studies that examine different age periods. For adults, a protective effect of employment on crime is consistently found (MacKenzie & De Li, 2002; Uggen, 2000). For youths and young adults, findings are more mixed.



For example, Fergusson, Horwood, and Woodward (2001) found that unemployment following school leaving is associated with criminal behavior for young adults. In addition, studying a sample of London boys, Farrington, Gallagher, Morley, St Ledger, and West (1986) found that youths who had left school committed more crimes during unemployment than when employed. However, others found that work for youths who are still in school is associated with an increase in offending (Bachman & Schulenberg, 1993; Staff & Uggen, 2003), suggesting that the timing of the transition to employment matters and that employment might only have the supposedly positive effect when it concerns an age-appropriate, instead of a precocious, transition.

Second, the historical timing of the study may also be important. Research by Sampson and Laub (1990), for example, demonstrates a gradual effect of employment on crime in a sample of juvenile delinquents followed up until age 32. In their study, job stability leads to a reduction of criminal behavior in adulthood. However, using a (in many ways) similar sample of juvenile delinquents, Giordano, Cernkovich, and Rudolph (2002) did not find job stability to reduce offending. These contradictory findings might be explained by the fact that the sample of Giordano et al. (2002) is a contemporary sample, while the boys in the Sampson and Laub study reached young adulthood in the 1940s and 1950s. Nowadays, the labor market as well as vocational education has changed, and the importance of educational degrees in finding employment has increased. Low-educated young adults therefore might find it increasingly difficult to enter the labor market and more often find themselves getting stuck in low-quality jobs. A longer spell of unemployment does seem to be associated with increased criminal behavior in present-day youths (Fergusson et al., 2001).

Third, findings on the effects of employment might differ because the samples under study differ in terms of risk factors and the risk of (re)offending. Horney, Osgood, and Marshall (1995) studied a sample of convicted offenders and found that work was only weakly related to offending. Surprisingly, they found that men committed more property crimes during months that they worked, perhaps because the workplace provided opportunities for theft. MacKenzie and De Li (2002) studied a sample of less serious offenders than Horney et al. (1995) and did find employment to reduce crime. Savolainen (2009) showed employment to reduce the rate of new convictions, again, like Horney et al. (1995), using a sample of convicted offenders. The effects of employment on crime thus appear to be especially mixed in high-risk samples. This is also found in experimental studies in which work programs for ex-offenders are evaluated, showing that work does not, or only under certain conditions, prevent recidivism (Bushway & Reuter, 2002; Visser et al., 2005).

Finally, the effects of employment on crime might be different for men and women. The study of Uggen and Kruttschnitt (1998), which is one of the few studies directly comparing the effect of employment for men and women, found that, for women, employment was associated with an 83 percent reduction in re-arrest, whereas, for men, being employed led to a 52 percent reduction in re-arrest. In contrast, Giordano et al. (2002) found no effect of employment on crime for men or women. As yet, too few studies have compared men and



women to draw definitive conclusions about possible gender differences in the relationship between employment status and offending.

## 2.4 THE CURRENT STUDY

In the current study, we examine the effects of employment and unemployment on crime in a contemporary sample of high-risk men and women, from ages 18 to 32. The follow-up period covers the years of emerging adulthood – a period in which employment gains significance in making the transition to adulthood.

The use of a contemporary sample is beneficial, since labor market circumstances have dramatically changed since the 1950s and 1960s, the period that the samples of most prior studies grew up in (Farrington et al., 1986; Sampson & Laub, 1990). Since then, many low-skilled jobs have disappeared, which is assumed to be especially detrimental for high-risk youth. The number of women participating in the labor market has also increased in the past decades (Van der Valk & Boelens, 2004). Given that most research has been done on males, it remains unknown to what extent developmental criminological theories that address the relationship between (un)employment and crime are applicable to women. This study adds to the few studies that also included females and speaks on the cross-gender generalizability of extant developmental theories.

In addition, the current study examines the effects of employment and unemployment on crime in a high-risk sample. Studying high-risk samples is important, because different theories make different predictions about the extent to which (un)employment affects criminal career development in young adults with a (very) problematic background. Moreover, the current study has a relatively long observation period of 15 years, as opposed to many available longitudinal studies that have a shorter follow-up period. This enables us to adequately examine the gradual effects of employment and unemployment on crime.

Finally, we study the association between employment status and offending in the Netherlands. While there are a small number of non-US studies (e.g., Farrington et al., 1986; Savolainen, 2009), the field is dominated by individual-level longitudinal studies carried out in the US – a country that differs (greatly) from most Western European countries, as far as the labor market and social security system are concerned. Given that, compared to the US, more generous social security benefits are available in the Netherlands, the effects of (un)employment on crime might be different. On the one hand, the financial motivation to work might be lower in the Netherlands, and people who do choose to work might therefore be more motivated to benefit from the non-monetary opportunities that employment provides. On the other hand, the consequences of unemployment could be more severe for someone in the US compared to someone in the Netherlands, who will receive income support while unemployed, rendering offending more likely.

Based on the theoretical framework outlined above, three hypotheses are stated, which will be tested separately for men and women. Since we lack clear theoretical grounds for guiding our expectations about the possible gendered

effects of (un)employment, we do not formulate explicit hypotheses about gender differences. First, we expect that, for high-risk young adults, over and above the effects of stable personal and background characteristics, being employed decreases the number of convictions. Second, we expect that, when high-risk young adults are employed for multiple consecutive years, their conviction frequency further decreases. Finally, we expect that, as high-risk young adults are unemployed for several consecutive years, their conviction frequency increases.

## 2.5 METHOD

### 2.5.1 *Sample*

The sample used in this study consists of 270 boys and 270 girls who were institutionalized in a judicial treatment institution for juveniles in the Netherlands. The sample consists of all boys who were discharged from the institution between 1989 and 1996. Since more boys than girls were treated in the institution, we sampled all girls who were discharged between 1990 and March 1999 to achieve a similar sample size for girls as for boys. During their stay, all respondents received treatment for problem behavior, which often included delinquency. Treatment was aimed at reducing the juveniles' problematic and delinquent behavior as well as providing education.

In the Netherlands, until recently, treatment in a judicial treatment institution could be imposed as a criminal-law measure as well as a civil-law measure. A criminal-law measure could be imposed when a juvenile has committed an offense and is between ages 12 and 18. A civil-law measure could be imposed when a child is under 18 years old and it is impossible for the child to remain at home, for example because of behavioral problems and an adverse family situation. In this sample, 56 boys (19.6%) and seven girls (2.6%) received treatment in the institution based on a criminal-law measure; the others were treated under a civil-law measure.

Boys stayed in the institution for 20 months on average (SD 12 months) and were 17 years and four months old on average (SD 15 months) when they were discharged. Girls stayed in the institution for 13 months on average (SD eight months) and were 16 years and seven months old on average (SD 15 months) when they were discharged.

After they had been discharged, the boys and girls were observed from ages 18 to 32. Eleven men and nine women died during the follow-up period, and two men and four women emigrated. For these respondents, the follow-up period was shorter than 15 years. For the current study, the follow-up period started when respondents were 18 years old, since information on employment was available for the total sample from age 18 onward, and practically all respondents left the institution shortly before or at age 18.

For this research, formal consent has been obtained from the Dutch Ministry of Justice.

### 2.5.2 Variables

#### **Personal and background characteristics**

Personal and background characteristics were extracted from respondents' treatment files, which were constructed during their stay in the institution. These treatment files were constructed by a multidisciplinary team and, for example, contain psychological and psychiatric reports, reports from the Dutch Child Protection Board, and treatment evaluations. Standardized and validated instruments, such as the Wechsler Intelligence Scale for Children-Revised, Child Behavior Checklist, Amsterdam Biographical Questionnaire for Children, Adolescent Temperament Questionnaire, and Dutch Personality Questionnaire-Junior, were used to construct reports about respondents.

For this study, several background characteristics that, on theoretical and empirical grounds (e.g., Caspi et al., 1998; Fergusson & Horwood, 1998; Gottfredson & Hirschi, 1990), are assumed to increase the risk of crime and unemployment were selected from the treatment files. These background characteristics are included in the analyses as dichotomous variables in order to control for relatively stable differences between individuals. Using dichotomous variables allows for a more comprehensible interpretation of the model estimates. Moreover, it releases us from making assumptions on the distribution of the scale scores and linearity of the associations. The following personal and background characteristics are included in the analyses: intelligence (low intelligence/average or above-average intelligence); level of education before treatment in the institution (low level of education/average or above-average level of education); aggression (yes/no); impulsiveness (yes/no); problems with authority (yes/no); and social skills (insufficient/sufficient social skills).

#### **Criminal career**

Information on offending is based on convictions registered in the judicial documentation abstracts of the Netherlands Ministry of Security and Justice. These abstracts contain information on every case that is registered at the public prosecutor's office and the ensuing verdict. Information about the type of offense and offense date is available. Because the offense date was not registered before 1995, missing offense dates were imputed with estimates based on the date of the conviction. As with all studies using official data, the analyses presented here thus pertain to offenses that came to the attention of the public prosecutor and most likely underestimate the actual number of crimes committed.

The dependent variable is the frequency of convictions for serious offenses.<sup>2</sup> Offenses are classified according to the standard classification for offenses in

2 Since we are studying a high-risk sample, we decided to focus on serious offending. However, we also estimated models with 'convictions for any type of offense' as the dependent variable. The results of these models are similar to those pertaining to serious crime only, with the effects of employment duration and unemployment duration being more outspoken for serious offending. Only the results for serious crime will be reported here. Results for any type of convictions can be obtained from the first author.

the Netherlands (Statistics Netherlands, 2000). Serious offending consists of violent offenses, property offenses, serious public offenses, drugs offenses, and weapon-related offenses (Loeber et al., 1998). Minor offenses such as vandalism and road traffic offenses are excluded from the analyses. The frequency of offending is corrected for incarceration.<sup>3</sup>

### **Employment**

Employment data were collected from Suwinet, the national database of the Ministry of Social Affairs and Employment in the Netherlands. The Suwinet database contains information about (official labor market) employment at the individual level from 1992 onward. In this database, the start date and end date of a job are registered. Additionally to Suwinet, the trade register ('KvK Bedrijvenregister') managed by the Netherlands Chamber of Commerce was accessed. This KvK register contains historical information about business ownership. The period someone had a business of their own was coded as being employed. Although, in the Suwinet database, all official employment contracts are registered, we lack information about undeclared work as well as about the type of job and whether someone was part-time or full-time employed. Furthermore, as the database became fully electronic from 1998 onward, employment participation rates before that time may underestimate actual employment levels; however, this underestimation is non-systematic. Given the possible underestimation of employment prior to 1998, the effects of employment on crime reported in this study can best be interpreted as conservative estimates.

Based on the information from the Suwinet database, an employment variable, an employment duration variable, and an unemployment duration variable were constructed. The employment variable has a value of 1 in those years during which someone was employed for at least 90 days a year.<sup>4</sup> The employment duration variable is 1 in the first year during which someone was employed for at least 350 days and was employed in the previous year for at least 350 days as well. This employment duration variable increases when someone works at least 350 days a year in consecutive years. Employment duration is defined in this way because we assume that one has to be employed for a longer period of time (continuously) in order for the gradual processes that are assumed to affect criminal behavior, like investment in social capital, to take place. When someone is employed for less than 90 days in the current year and was also employed for less than 90 days the previous year, the unemployment duration variable has a value of 1. The unemployment duration variable mounts up when someone works less than 90 days in a number of consecutive years. According to this definition, someone is continuously unemployed when he or she is employed

3 Since offending is less likely to occur when a respondent is incarcerated, time spent incarcerated is corrected for with the following formula:  $\text{Exposure}_{ji} = 1 - (\text{number of days incarcerated} / 730)$ , where  $j$  is the respondent and  $i$  is the year of observation (see Van der Geest et al., 2009).

4 Results are similar when the employment variable is constructed based on different minimum number of days, namely 80–180 days.

for less than 90 days for at least two years in a row. Unemployment duration is defined in this way because we assume that the gradual (cumulative) consequences of unemployment start to manifest when someone is employed for less than 90 days a year, since there is then little chance for attachment to the labor market to occur.

As with the frequency of convictions, the number of days (un)employed is corrected for incarceration.

### **Marriage and parenthood**

Besides (un)employment, marriage and parenthood are two other important social institutions that can influence the criminal career (for a review, see Blokland & Nieuwbeerta, 2010). To study the effects of employment and unemployment, over and above the effects of marriage and parenthood, we included time-varying variables for marriage (yes/no in each age year) and parenthood (yes/no in each age year) in the analyses as control variables. Information about marriage and parenthood was collected from the Dutch Municipal Population Register ('Gemeentelijke Basisadministratie Persoonsgegevens').

A person-period file was constructed from our dataset in order to analyze the above-mentioned variables. This file contains a separate row for each year a person is observed. Time-varying variables, such as employment, can have different values in different years, whereas time-stable variables, such as intelligence, have the same value in all rows of the same person. The person-period file contains the above-mentioned personal and background characteristics, which are treated as stable, since they are measured only once during adolescence. Furthermore, a variable pertaining to the criminal behavior prior to age 18 – whether someone was convicted of a serious offense before age 18 – is included in the person-period file. We included these early measured characteristics as time-stable variables in the model to control for possible selection effects.

### **2.5.3 Analyses**

When examining the effects of (un)employment on crime, the problem of selection occurs: unemployed people might have different characteristics from employed people, and those characteristics might also be related to crime (Gottfredson & Hirschi, 1990). Two analysis techniques are used to deal with this problem of selection as well as possible.

First, a random effects model is used to estimate the effect of (un)employment on crime. The random effects model considers each intercept as a result of random deviation from some mean intercept. It estimates the effect of both time-stable and time-varying variables. Although we take into account a number of time-stable differences between individuals that are likely to be related to both employment and crime, the estimated effect of time-varying variables such as employment in these kinds of analyses should be interpreted cautiously, as bias resulting from unobserved variables can be at play.

For that reason, a second analysis technique, a fixed effects model, is used as well. A fixed effects model examines only within-individual change and controls for all stable individual characteristics, measured or unmeasured, as long as those characteristics do not change over time. By controlling for both observed and unobserved differences between individuals, the fixed effects model is very useful when controlling for selection (Allison, 2005). A disadvantage of the fixed effects model is that the effect of stable background characteristics cannot be estimated, because the model controls for these characteristics.

Both random and fixed effects models are estimated using a Poisson model, since the dependent variable, that is, the number of convictions of a serious offense, is a count variable. The estimated percentage increase or decrease in conviction rates can be calculated using the coefficients estimated in the models in the following formula:  $(e^{\beta}-1)*100$ .

For this article, four random and three fixed effects models are estimated. In the first model, the effect of stable background characteristics on the risk of a conviction is estimated (using a random effects model). In the second model, the effect of employment on crime is estimated, controlling for background characteristics, marriage, and parenthood. In the third model, we examine the effect of employment duration on offending, over and above the effect of stable and time-varying control variables and the instantaneous effects of employment. Finally, the fourth model estimates the effects of employment, employment duration, and unemployment duration on crime, taking into account the influence of background characteristics, marriage, and parenthood.

## 2.6 RESULTS

### 2.6.1 *Descriptives*

Based on information from the treatment files compiled during the juveniles' stay in the treatment institution, the following picture of the sample emerges. The IQ of about one-third of the juveniles is below average. Over 30 percent of the boys and a quarter of the girls had a low level of education before entering the institution. Furthermore, the majority of the sample displayed aggressive behavior and was (highly) impulsive when entering the institution. In addition, about half of the boys and girls showed problems with authority. Lastly, these youths often had psychological problems and grew up in problematic home environments. All in all, these juveniles are at high risk of developing a (persistent) criminal career, while, at the same time, their prospects at the labor market are limited. For more information about this sample, we refer to Van der Geest, Blokland, and Bijleveld (2009), who studied the boys, and to Megens and Day (2007), who studied a sub-group (148 of 270 girls) of the sample of girls in this study.

### 2.6.2 Criminal career

Prior to age 18, 80.7 percent of the boys and 55.6 percent of the girls were convicted of an offense at least once. Of these juvenile offenders, boys committed 6.6 offenses (SD 4.7) on average and girls 2.4 (SD 2.2). During the observation period (from ages 18 to 32), 76.3 percent of the males and 42.2 percent of the females are (re)convicted at least once. The average number of convictions is 13.8 (SD 17.3) for male adult offenders and 4.6 (SD 5.3) for female offenders (see Table 2.1).

**Table 2.1 Descriptives of the sample, presented separately for males and females**

	Males (N=270)		Females (N=270)	
	N	%	N	%
Personal characteristics				
Low intelligence	72	26.7	93	34.4
Low level of education	86	31.9	62	23.0
Aggression	173	64.1	178	65.9
Impulsiveness	156	57.8	142	52.6
Problems with authority	131	48.5	146	54.1
Lack of social skills	154	57.0	219	81.1
Crime				
Conviction for serious offense < age 18	218	80.7	150	55.6
Conviction for serious offense age 18-32	206	76.3	114	42.2
Average number of convictions for serious crimes age 18-32	13.8 (SD 17.3)		4.6 (SD 5.3)	
Employment				
Ever > 90 days employed	216	80.0	195	72.2
Average number of contracts°	8.6 (SD 7.1)		8.2 (SD 8.1)	
Average duration of contract (in days) °	213 (SD 487)		193 (SD 384)	
Unemployment				
Ever unemployment spell	255	94.4	248	91.9
Average number of unemployment spells	1.4 (SD 0.6)		1.4 (SD 0.5)	
Average duration of unemployment spell	6.0 (SD 4.0)		6.4 (SD 4.0)	
Married				
	62	23.0	54	20.0
Child(ren)	97	35.9	190	70.4

<sup>°</sup> When calculating the average number of contracts and the average duration of a contract, contracts shorter than 90 days were also taken into account.

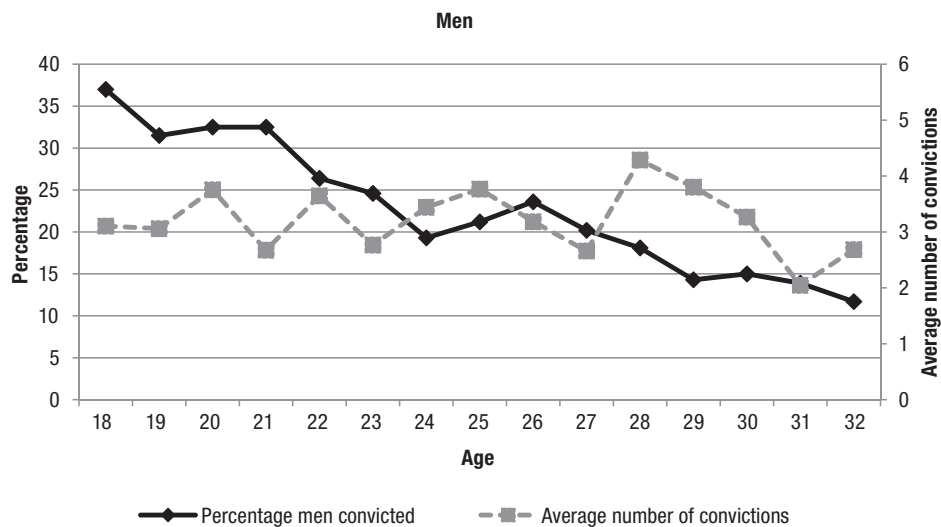


Figures 2.1 and 2.2 show the percentage of men and women convicted of an offense during each age year (participation) as well as their average number of convictions (lambda). To prevent underestimation of the average number of convictions, differences in 'street time' resulting from incarceration are accounted for. While more men than women are convicted at each age, both men and women show a decline in criminal participation with age. Why participation drops so steeply for women between ages 18 and 20 is unclear.<sup>5</sup> The average yearly number of convictions is relatively stable for both men and women. For women, the remarkable peak in lambda at age 31 is due to the fact that only a few women are criminally active at that age and that one of these criminally active women happens to be convicted for an exceptionally large number of offenses.<sup>6</sup>

### 2.6.3 Employment

During the observation period, 80.0 percent of the males and 72.2 percent of the females are employed for a minimum of 90 days at least once. Despite these high participation rates, employment stability in this high-risk sample is low. Men who work at some point during the observation period have, on average, 8.6 job contracts (SD 7.1) and women have 8.2 (SD 8.1).

**Figure 2.1** Percentage of men (N=270) convicted of a serious offense and average number of convictions per age year (corrected for incarceration)

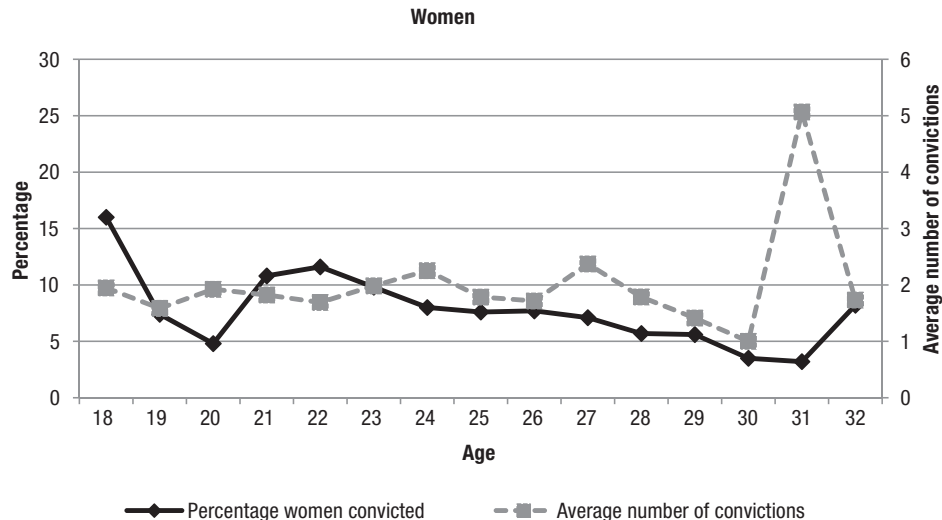


5 This might be related to the relatively young age at which women in this high-risk sample had their first child: around 40 percent of the women had their first child before the age of 21.

6 At age 31, two women are convicted twice, while another woman is convicted 11 times for a serious offense.



**Figure 2.2** Percentage of women (N=270) convicted of a serious offense and average number of convictions per age year (corrected for incarceration)



These contracts, on average, span 213 days (SD 487) for men and 193 days (SD 384) for women (see Table 2.1).

The employment careers of both men and women are thus characterized by instability and are repeatedly interrupted by spells of unemployment. Moreover, during the follow-up period, almost all men and women – 94.4 and 91.9 percent, respectively – are unemployed for at least two consecutive years (thus building up at least one year of unemployment duration). The number of unemployment spells is 1.4 (SD 0.6) on average for men and 1.4 (SD 0.5) for women. The average duration of an unemployment spell is 6.0 years (SD 4.0) for men and 6.4 years (SD 4.0) for women.

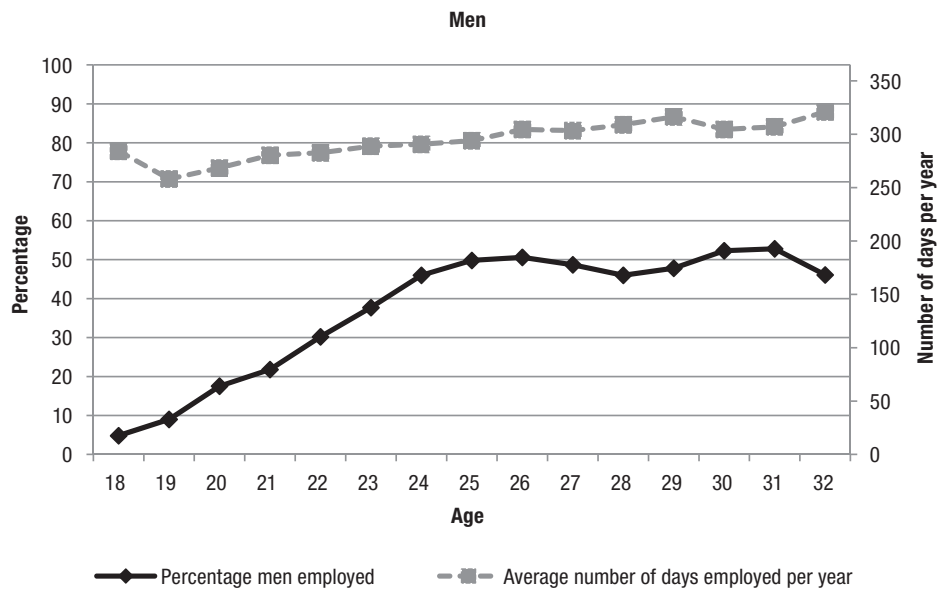
Figures 2.3 and 2.4 show the percentage of men and women working (at least 90 days that year) at each age as well as the average number of days working each year, within the group of employed men and women. At age 18, only a small proportion of the men are employed. Until the age of 25, there is a strong increase in employment participation, after which employment participation stagnates at around 50 percent. While more women than men work at age 18, the increase in employment participation for women is slower. At the end of the observation period, approximately 40 percent of the women are employed. The average number of days employed per year slightly increases with age for both men and women.

Employment participation in this high-risk sample is considerably lower in comparison to the general Dutch population. In the Dutch population, almost 90 percent of the men and around 72 percent of the women are employed at age 30 (Statistics Netherlands, 2010). When we compare our sample with the group of low-educated Dutch men and women, a group that is more similar to

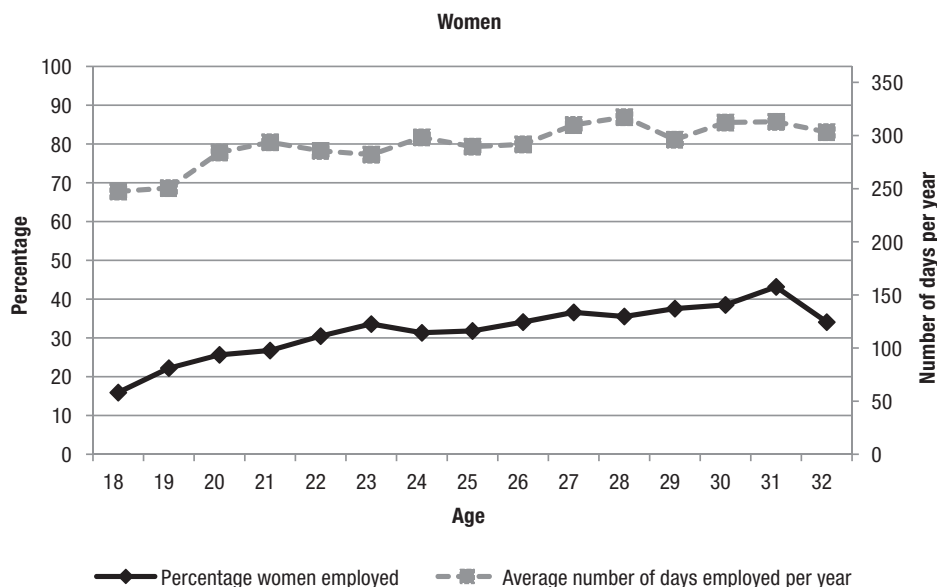
our high-risk sample than the general Dutch population, we find that 83.7 percent of the low-educated men and 46.6 percent of the low-educated women are employed at age 30 (Statistics Netherlands, 2010). In comparison, in our sample, 52.3 percent of the men and 38.5 percent of the women are employed at age 30. Although the difference in employment participation between low-educated women and high-risk women is smaller, the difference in employment participation for men remains large. This large difference for men is only partly due to our stricter operationalization of employment participation; when we drop the condition of a minimum of 90 days' employment, employment participation is still around 60 percent. Without the condition of being employed for a minimum of 90 days, 59.9 percent of the men and 44.3 percent of the women are employed at age 30.

Information about employment in Table 2.1 and Figures 2.3 and 2.4 is based on the number of days employed, corrected for incarceration. We considered unemployment due to incarceration as a different condition (which we decided to control for) from unemployment while not being incarcerated. Without this distinction, we would have overestimated unemployment in this sample.

**Figure 2.3** Employment participation of men (N=270) and the average number of days employed per year (corrected for incarceration)



**Figure 2.4** Employment participation of women (N=270) and the average number of days employed per year (corrected for incarceration)



#### 2.6.4 *Effects of employment, employment duration, and unemployment duration on crime*

To determine the effects of employment, employment duration, and unemployment duration on crime, both random effects models and fixed effects models were estimated. All models were estimated separately for men and women; results are presented in Tables 2.2 and 2.3, respectively.

First, a random effects model was estimated to determine the effect of stable background characteristics on crime. For men, a conviction of a serious offense before age 18 significantly increases the number of convictions after age 18. There is no additional effect of other background characteristics on offending after age 18, when convictions for serious offenses before age 18 are taken into account.

The second model estimates the effect of employment on crime, controlling for the effects of stable background characteristics, marriage, and parenthood. This model shows that employment significantly lowers the rate of convictions. The third model, in which employment duration is added to the model, shows that employment duration has an additional effect on offending, over and above the effect of being employed, being married or having a child, and stable background characteristics.

Lastly, a fourth model is estimated, which examines the effects of employment, employment duration, and unemployment duration on crime, over and above

the effects of stable and dynamic controls. This model shows the significant effect of employment on crime, as well as the effect of employment duration on crime remain. For men, being employed reduces the number of convictions by 48.8 percent.<sup>7</sup> In addition, every additional year that men are continuously employed further reduces the number of convictions by 18.1 percent. Unexpectedly, every year that men are unemployed, the number of convictions is estimated to decrease as well, but only slightly, by 4.9 percent (see Table 2.2). For comparison, for men, marriage is associated with a decrease in the number of convictions by 27.4 percent.

For women, the first model shows that, besides a conviction for a serious offense before age 18, low intelligence also increases the rate of offending from age 18 onward. The second model shows that employment significantly reduces the number of convictions when background characteristics, marriage, and parenthood are held constant. The third model shows that, for women, employment duration has no significant additional effect on the number of convictions. When, in the fourth model, unemployment duration is added to the model, the analysis shows that employment still significantly reduces the number of convictions while employment duration has no additional effect. Furthermore, for women, unemployment duration is associated with an increased number of convictions. Being employed for women is associated with a reduction in offending by 46.2 percent. Every additional year for which women are unemployed, the number of convictions increases by 12.7 percent (see Table 2.3).

As is shown in the lower panels of Tables 2.2 and 2.3, the above-mentioned results of the random effects models are, to a large extent, supported by the results from the fixed effects models. This suggests that these effects do not result from selection based on unobserved heterogeneity in unmeasured stable characteristics. Random effects models are also re-estimated using the pooled data for males and females. A dummy variable 'gender' (0 = male, 1 = female) is added in the analyses, as well as interaction variables of gender with the other relevant variables, such as 'gender x work'. The results of the random effects models on the pooled data are similar to the results from the separate random effects models for men and women. A negative main effect of employment and employment duration on offending is found, with no differences between men and women. Furthermore, a significant negative main effect of unemployment duration and a significant interaction effect of 'gender x unemployment duration', are found. This means that the effect of unemployment duration is different for men and women: unemployment duration is associated with a reduction in the number of convictions for men and with an increase in the number of convictions for women.

7  $(e^{0.67}-1)*100 = -48.8$

**Table 2.2** Effects of background characteristics, marriage, and parenthood and employment, employment duration, and unemployment duration on convictions of serious offenses for men (N=270)

	Model 1		Model 2		Model 3		Model 4	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Intercept	-1.82*	0.78	-1.53†	0.78	-1.52†	0.78	-3.19**	0.94
Age <sup>°</sup>	1.05†	0.61	0.67	0.62	0.66	0.62	2.09**	0.77
Age <sup>2°</sup>	-0.38**	0.13	-0.25*	0.13	-0.25†	0.13	-0.52**	0.16
Low intelligence	0.29	0.21	0.28	0.20	0.28	0.20	0.28	0.20
Low level of education	0.04	0.19	0.02	0.19	0.02	0.18	0.02	0.19
Aggression	-0.30	0.20	-0.21	0.19	-0.21	0.19	-0.22	0.19
Impulsiveness	0.25	0.21	0.24	0.20	0.24	0.20	0.24	0.20
Problems with authority	0.19	0.19	0.20	0.18	0.21	0.18	0.21	0.18
Lack of social skills	0.06	0.20	0.07	0.19	0.07	0.19	0.06	0.19
Conviction for serious offense < age 18	1.20***	0.24	1.17***	0.23	1.16***	0.23	1.15***	0.23
Marriage			-0.34*	0.16	-0.32*	0.16	-0.32*	0.16
Parenthood			-0.09	0.08	-0.08	0.08	-0.10	0.08
Employment			-0.59***	0.07	-0.54***	0.07	-0.67***	0.08
Employment duration					-0.19**	0.07	-0.20**	0.07
Unemployment duration							-0.05**	0.02
Log likelihood	-4215.19		-4093.55		-4088.31		-4083.65	
Likelihood ratio	3310.22***		2663.69***		2608.07***		2617.80***	
<b>Fixed effects coefficients<sup>°°</sup></b>								
Employment			-0.53***	0.07	-0.49***	0.07	-0.64***	0.08
Employment duration					-0.14*	0.07	-0.15*	0.07
Unemployment duration							-0.06**	0.02

† p&lt;0.10; \*p&lt;0.05; \*\*p&lt;0.01; \*\*\*p&lt;0.001.

° Age/10.

°° N=204. The number of respondents is smaller than in the random effects models, because respondents that do not experience change over time in time-varying variables are excluded from the fixed effects models.

**Table 2.3** Effects of background characteristics, marriage, and parenthood and employment, employment duration, and unemployment duration on convictions of serious offenses for women (N=270)

	Model 1		Model 2		Model 3		Model 4	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Intercept	-2.01	1.86	-1.17	1.88	-1.20	1.88	2.93	2.44
Age <sup>°</sup>	-0.68	1.57	-1.43	1.59	-1.41	1.59	-4.84*	2.04
Age <sup>2°</sup>	0.03	0.33	0.22	0.33	0.22	0.33	0.85*	0.41
Low intelligence	0.71*	0.28	0.70**	0.27	0.71**	0.27	0.68*	0.26
Low level of education	0.06	0.30	-0.04	0.29	-0.05	0.29	-0.08	0.29
Aggression	0.12	0.32	0.25	0.31	0.25	0.31	0.29	0.31
Impulsiveness	0.17	0.26	0.13	0.25	0.12	0.25	0.09	0.25
Problems with authority	-0.00	0.29	-0.06	0.28	-0.06	0.28	-0.09	0.28
Lack of social skills	0.40	0.33	0.40	0.32	0.41	0.32	0.39	0.32
Conviction for serious offense < age 18	1.17***	0.27	1.13***	0.26	1.12***	0.26	1.10***	0.26
Marriage			0.26	0.23	0.26	0.23	0.27	0.23
Parenthood			0.02	0.09	0.01	0.09	0.02	0.09
Employment			-0.96***	0.18	-0.88***	0.19	-0.62**	0.21
Employment duration					-0.22	0.16	-0.18	0.16
Unemployment duration							0.12**	0.05
Log likelihood	-1287.09		-1241.57		-1240.46		-1236.79	
Likelihood ratio	689.85***		584.46***		582.04***		553.46***	
Fixed effects coefficients <sup>°°</sup>								
Employment			-0.79***	0.20	-0.73***	0.20	-0.57*	0.22
Employment duration					-0.19	0.17	-0.16	0.17
Unemployment duration							0.09†	0.05

† p&lt;0.10; \*p&lt;0.05; \*\*p&lt;0.01; \*\*\*p&lt;0.001.

° Age/10.

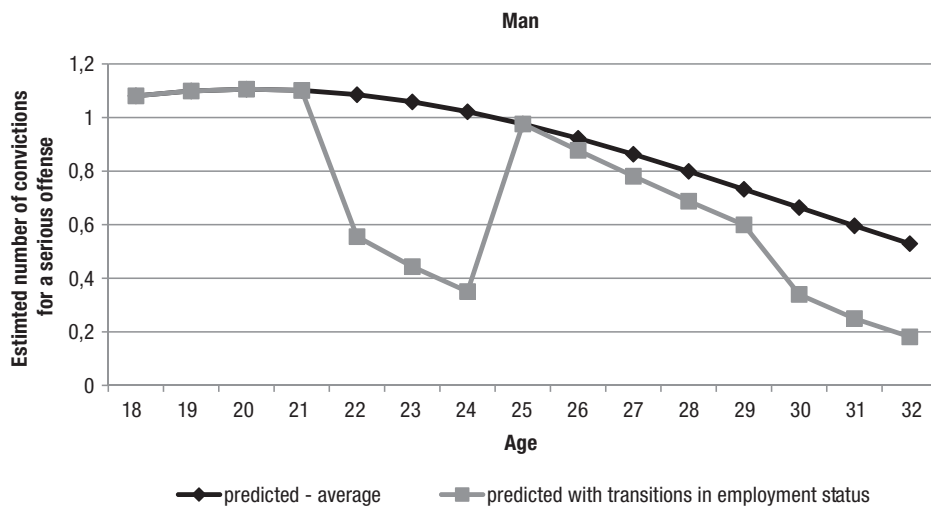
°° N=113. The number of respondents is smaller than in the random effects models, because respondents that do not experience change over time in time-varying variables are excluded from the fixed effects models.

In addition, fixed effects are estimated using the pooled data as well. Variables are constructed in a way that, for every variable, there is a 'male' and a 'female' variable, such as 'male x work' and 'female x work'. The construction of the interaction variables in this way is necessary, because gender is a constant variable, and a fixed effects model excludes time-stable variables from the model.

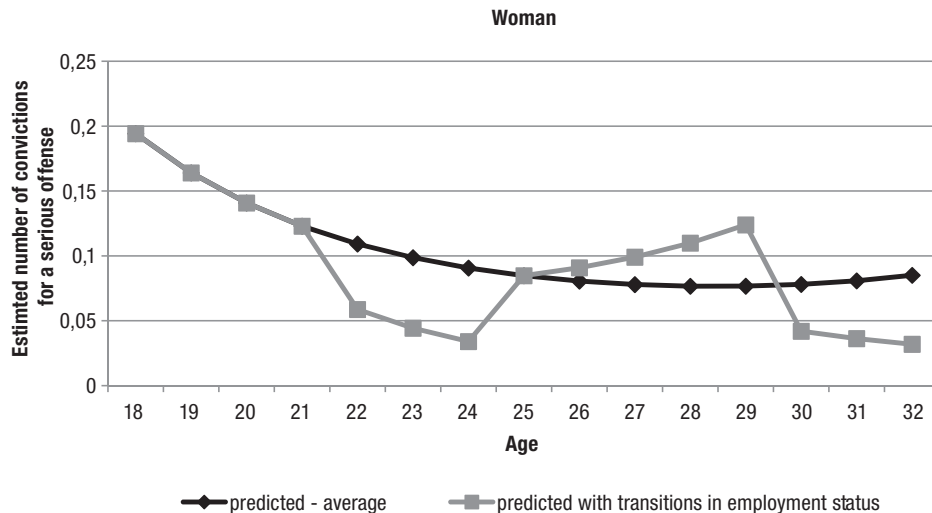
The results of the fixed effects models are the same as the results from the separate fixed effects models for men and women. The advantage of estimating the fixed effects models on the whole sample is that we can compare the coefficients for men and women. A comparison of the coefficients for employment, employment duration, and unemployment duration shows that, for employment and employment duration, there is no difference between men and women. However, there is a significant difference between men and women in the effect of unemployment duration.

In sum, these additional random and fixed effects analyses confirm that employment has a negative effect on offending for both men and women. We only find an effect of employment duration for men. The effect of unemployment duration differs significantly for men and women. These findings are in line with our findings for men and women separately.

**Figure 2.5** Estimated number of convictions for a fictitious average man, with and without transitions in employment status



**Figure 2.6** Estimated number of convictions for a fictitious average woman, with and without transitions in employment status



To illustrate the results of the random effects models, Figures 2.5 and 2.6 show the curve for the estimated number of offenses of the average – in terms of stable risk factors – male and female in the sample based on the parameters found in Model 4. By way of example, we construct a fictitious life course in which the average male starts working at age 21, is unemployed from ages 25 to 30, and is continuously employed after that. Figure 2.5 shows that, when the average man gets a job at age 21, his estimated rate of convictions decreases. When, at age 25, the man loses his job, the number of convictions increases initially but slowly starts to decrease again with every year he remains unemployed. At age 30, when he is employed again, we see a steep decline in his estimated rate of convictions. When the average woman loses her job at age 25, her estimated conviction rate increases for every year she is unemployed. When she finds a job at age 30, her conviction rate drops again (see Figure 2.6).

## 2.7 DISCUSSION

Using longitudinal data on a sample of men and women who previously received treatment in a juvenile justice institution, this article examined both criminal and employment career development as well as the effects employment and unemployment have on crime in high-risk young adults (ages 18-32). For both men and women in the sample, participation in crime decreased with age, while participation and frequency of employment increased. Employment participation for both men and women in our sample, however, remains far below normative levels in the Netherlands. While approximately three-quarters of the sample is employed at least once during the observation period,



the overall stability in employment is low. Most high-risk young adults work several short-lived jobs during the observation period and their employment careers evidence multiple spells of unemployment.

Random effects and fixed effects models were estimated to examine the effects of employment, employment duration, and unemployment duration on offending. Even when controlling for stable between-person differences that influence both crime as well as (un)employment, the results demonstrate that employment exerts both instantaneous as well as gradual effects on the criminal careers of high-risk men and women.

A number of findings stand out. First, employment significantly reduces the number of convictions for both men and women, which means that the first hypothesis regarding the instantaneous effects of employment can be accepted. Second, continuous employment, on the other hand, had an additional effect on offending for men, but not for women. The lack of a gradual effect of employment for women suggests that even though the gap between men's and women's employment participation is closing, the meaning of work, at least in the specific sample under study, may still differ between men and women. This is in line with prior research, suggesting that employment is of less importance to women, especially when work is combined with multiple other conventional social roles (McFayden, 1995; Thoits, 1986). This might also be the case in our sample, since more women than men in this study have children, and already at very young ages (Zoutewelle-Terovan et al., 2012).

For both men and women in our sample, a long-term effect of unemployment on crime was found. For women, longer unemployment duration leads to more convictions, over and above the effect of unemployment per se. However, for men, a small but significant effect of unemployment duration was found in the opposite direction. Contrary to prior research, showing detrimental effects of unemployment for men (Paul & Moser, 2009), a longer unemployment duration for men leads to a decrease in offending. For the women in our sample, it is plausible that long-term unemployment causes financial problems, especially since many of the women have to take care of their under-aged children. The slightly positive effect of unemployment duration for men might be explained by the, compared to the US, relatively generous Dutch system of social security benefits, which reduces the financial strain resulting from unemployment (Savolainen, 2009), especially when there are no parental obligations. Furthermore, it is very well possible that part of the unemployed men in our sample are unable to work due to psychological problems. High-risk men often experience physical and mental health problems in adulthood as well as problems with substance abuse (e.g., Kratzer & Hodgins, 1997; Lewis et al., 1994; Moffitt et al., 2002; Odgers et al., 2007) and seem to be more often institutionalized in psychiatric hospitals or treatment centers for alcohol or drug addictions than are high-risk women (Kratzer & Hodgins, 1997). As a result, opportunities for these men to commit crime may also be reduced.

To conclude, only a few of the high-risk men and women in the sample remain officially unemployed during the entire follow-up. However, while most men and women do transition into the workforce, few seem to do so with much

success, as their work histories are highly unstable and characterized by multiple spells of unemployment. Still, the ones that do make the transition to work benefit from this transition in the sense that they show a decrease in criminal behavior. Contrary to what theories as those of Gottfredson and Hirschi (1990) and Moffitt (1993) predict, it appears that, even for young adults with a highly problematic background, employment can be of great importance in the desistance process. It does appear to be difficult for these young adults, once they have a job, to hold on to it, which precludes them from optimally benefitting from the advantages employment has to offer.

Although this study combines a relatively long observation period with rich background information, some cautions concerning using official registered data, such as the judicial documentation and the employment database Suwinet, must be made.

On the one hand, using officially registered data has its advantages. For example, there is no non-response and selective dropout, and information is accurate because we do not have to rely on respondents remembering certain events and the exact timing of those events. On the other hand, a disadvantage of officially registered data is that it concerns only officially registered information on the criminal career and the employment career. With regard to crime, it is known that a (large) proportion of crimes committed do not become known to the police (Van der Heide & Eggen, 2003). Even when someone is arrested, that person is not always prosecuted and convicted. Using only registered convictions thus underestimates the total number of offenses. This underestimation is argued to be even larger for women, since women are less often arrested, prosecuted, and convicted (Uggen & Kruttschnitt, 1998). However, a Dutch longitudinal study comparing the criminal careers of men and women did not find evidence for such gender inequality at the level of the public prosecutor (Block et al., 2010).

In Suwinet, all official employment contracts are registered, which means information about undeclared work is missing. Especially in this high-risk sample, working in the black labor market will not be unusual, for instance, as opportunities for conventional employment are limited because of a criminal record (Pager, 2003). Another disadvantage of registered data is the lack of information about the type of job and the subjective experience of work. Research shows that certain aspects of work, including quality of work and job satisfaction, determine whether work can be of influence on crime (Allan & Steffensmeier, 1989; Uggen, 1999; Wadsworth, 2006). As a result of the data sources used in this study, the effects of individual perceptions of a particular job could not be tested.

In line with this latter caution, some directions for future research can be mentioned. Although this study shows that employment and employment duration affect the desistance process, the causal mechanisms remain unclear. Self-report studies or qualitative research on, for example, quality of work and the subjective experience of work, and the possible differences herein between men and women, could provide more insight into these causal mechanisms.

In the current study, we examined the effects of employment and unemployment on crime. However, reciprocity between different life domains is a core assumption of the life-course approach and, just as employment is found to influence criminal behavior, criminal behavior is likely to influence an individual's chances in the labor market. In fact, several studies have shown that a criminal record can have long-lasting detrimental effects on a person's employment career (Nagin & Waldfogel, 1995). Future research may look for ways to capture the complex reciprocal relationship between work and crime to gain further insight into the mechanisms at play.

Finally, research on the role of income support might be especially interesting. In the Netherlands, unlike in the US, people who are unemployed are in most cases entitled to social security benefits. This income security may change the effect of (un)employment on crime. Although several studies examine the relationship between economic assistance and crime on the macro level (see, e.g., Baumer & Gustafson, 2007; DeFronzo, 1996; 1997; Savage et al., 2008), it is at this moment still unclear whether receiving social security benefits has a similar reducing effect on criminal behavior as employment on the individual level.

## WORK, INCOME SUPPORT, AND CRIME IN THE DUTCH WELFARE STATE. A LONGITUDINAL STUDY FOLLOWING VULNERABLE YOUTHS INTO ADULthood<sup>1</sup>

### Abstract

*Using longitudinal information on a sample of vulnerable men and women (N=540) who were institutionalized in a Dutch juvenile justice institution in the 1990s, this study examines the effects of employment as well as different types of income support on crime. Results show that, although the vast majority of the sample is employed at least once during the observation period, a large number of men and women also receive income support at some point during young adulthood. Random- and fixed-effects models show that for men, both work and income support are associated with a reduction in the rate of offending. For women, however, employment is correlated with a lower offending rate, while receiving income support, and in particular disability benefits, is correlated with higher offending.*

### 3.1 INTRODUCTION

The Netherlands has a relatively generous system of income support to ensure that those who are needy have a minimum income. The aim of the Dutch welfare state is to reduce inequality by redistributing income in order to avoid poverty and social exclusion, thereby preventing people from turning to illegal means to make ends meet (De Mooij, 2006). Although work is the ultimate goal of the welfare state, the idea is that those who are unable to (find) work should nevertheless be supported. The system of income support is thus designed to provide a social safety net for society's most vulnerable members (De Gier & Ooijens, 2004; De Mooij, 2006).

One such vulnerable group comprises young adults who, in their adolescent years, displayed serious behavioral problems and were consequently

<sup>1</sup> This chapter is submitted as: Verbruggen, J., Apel, R., Van der Geest, V. & Blokland, A. Work, income support and crime in the Dutch welfare state. A longitudinal study following vulnerable youths into adulthood.

institutionalized in a juvenile justice institution (Verbruggen, Blokland & Van der Geest, 2012). These individuals face difficulties when they transition into adulthood because they experience problems in multiple domains. First, they often grew up in adverse family environments, and their parents may be unable or unwilling to support them in the transition to adulthood (Schoeni & Ross, 2005). Second, they often suffer from psychological or psychiatric problems and in general acquire little education. Third, these youths can experience difficulties due to stigma because of their involvement in government systems such as child protection service or the juvenile justice system, their stay in a juvenile justice institution, and a criminal record (Osgood et al., 2005).

For vulnerable youths to make a successful transition to adult social roles such as employment, they need to overcome additional hurdles compared to non-vulnerable youths. Previous research on a sample of such high-risk, vulnerable youths who were treated for problem behavior in a juvenile justice institution in the Netherlands showed that in young adulthood, their labor market participation is below average, their employment careers are unstable, and social welfare receipt is comparatively more common. Furthermore, the majority of these youths engaged in criminal behavior in adulthood (Verbruggen et al., 2012). However, vulnerable youths can and sometimes do make a successful transition into adulthood and end up leading normal, conventional lives (Osgood et al., 2005). Indeed, previous research shows that those high-risk youths who are able to make the transition to stable work show a decrease in their criminal behavior (Verbruggen et al., 2012).

Since the Dutch income support system is designed to function as a safety net to support vulnerable people such as the high-risk youths described above, the question arises as to what extent these youths actually profit from receiving benefits. Does governmental support prevent them from turning to illegitimate means to provide for themselves? How does the effect of governmental support compare to the effect of employment, which not only provides income, but also workplace social control and social capital, which are thought pivotal in promoting criminal desistance (Laub & Sampson, 2003)? These questions guide the current study.

### 3.2 THE DUTCH WELFARE STATE

Esping-Andersen (1990) developed a typology in which income support regimes are classified by their degree of 'decommodification,' or the extent to which individuals are protected from the vicissitudes of the market and granted income support and other social services 'on the basis of citizenship rather than performance' (1990:21) (for other typologies, see Arts and Gelissen, 2002). *Social democratic regimes*, such as those found in Scandinavian countries, have highly decommodified policies providing universal entitlements with generous benefit levels. *Conservative regimes*, which include many countries in continental Western Europe, provide for comparatively strong entitlements but make benefit levels dependent on contributions. *Liberal regimes*, characteristic

of Anglo-Saxon nations, have highly commodified policies that impose strict eligibility criteria and provide for minimal benefits.

In the foregoing typology, the Netherlands tends to display elements of both conservative and social democratic regimes. The Dutch welfare state took shape in the post-war period when many income support policies were implemented, and developed into a generous system of entitlements. Due to economic crises, however, in recent years policies have been implemented to reduce the expenditures of the welfare state, and reform of the income support system is still ongoing in efforts to keep the system affordable in the light of such trends as the aging of the population (De Gier & Ooijens, 2004; De Mooij, 2006). Despite these reforms, the Netherlands still has an extensive and, compared to other countries, relatively generous social redistribution system. In fact, the Dutch welfare state is regarded as one of the most advanced in the world (Cantillon, 2004).

The Dutch income support system consists of two main parts (De Gier & Ooijens, 2004; De Mooij, 2006).<sup>2</sup> The first component consists of social insurance systems, which are compulsory and non-means tested. Employed people are obliged to contribute to these insurances by paying a percentage of their wages, and the benefits are wage-related. Two types of social insurances can be distinguished: *unemployment* insurance and *disability* insurance. The goal of unemployment insurance is to replace the income lost to employees who lose their job. Disability insurance is meant to deal with the risk of becoming unable to work, either due to physical or mental health problems. The second component consists of public assistance, the most important being *welfare* assistance, which is meant to assure recipients with a minimum income. Such benefits do not require proof of anything other than financial need nor are they conditional on past contributions. Public assistance is paid from general funds, and every resident of the Netherlands is in principle eligible to receive it.

### 3.3 THEORY

In order to understand the possible effects of employment and income support on criminal behavior, this study appeals to theories emphasizing motivations and controls. On the one hand, the experience of financial strain might explain why some individuals resort to crime – crime can be a source of illegal income motivated by difficulties in the labor market. On the other hand, employment is likely to constitute an important stake in conventional society that can constrain people from behaving unlawfully, and crime is deemed more likely when individuals lack this form of social control. These two broad theoretical traditions are elaborated below.

Theories rooted in motivations begin with the observation that crime is more heavily concentrated among individuals who are unemployed and living in poverty. Merton's strain theory (1938, 1968) explains that when legitimate

2 The Dutch system of income support also includes pensions and health-care insurance, but given the scope of the current study, these are not discussed here.

opportunities for the acquisition of monetary success are blocked or unavailable, individuals are motivated to 'innovate' in the most expedient manner, often through criminal behavior (see also Cloward and Ohlin, 1960). While contemporary versions of Merton's theory rely less heavily on a class-based conception of strain (e.g., Agnew 1985, 1992), crime is nevertheless viewed as a way to alleviate income pressures from unemployment and poverty. Similarly, theories rooted in neoclassical economics explain that individuals faced with financial strain are motivated to substitute or supplement with criminal earnings (Becker, 1968; Ehrlich, 1973). Under these circumstances, the expected net returns from illegal behavior are higher because there are no opportunity costs of losing a job when one is unemployed (see also Piliavin et al., 1986).

According to theories emphasizing motivations, then, the loss of legitimate income is determinative for understanding the link between unemployment and crime and, even more specifically, between unemployment and property crime. Yet in a decommodified society, as in the Netherlands, unemployed individuals are entitled to receive fairly generous government benefits. The theoretical implications are as follows: since employment and income support both provide legitimate sources of income, they should equally reduce the attractiveness of criminal behavior. While income support levels might not achieve the same crime reduction as paid employment, even in a regime as generous as the Dutch welfare state, they should nevertheless yield benefits with respect to the control of crimes of an instrumental nature (i.e., property crime).

Theories rooted in controls point to characteristics of employment other than (or in addition to) earnings. According to Hirschi's social control theory, people who are employed experience supervision and socialization from employers and co-workers and possess work schedules which limit the amount of time available for criminal involvement (Hirschi, 1969; see also Shover, 1996:98). Unemployed individuals, on the other hand, lack the structure and routines which correspond to steady labor market participation. In addition to these more or less direct social controls, employment provides a means of informal social control over unlawful behavior (Sampson & Laub, 1993). Attachment to a high-quality, stable job provides people with feelings of responsibility, usefulness, and competence. Over time, it culminates in growth in social capital, suggesting that employed individuals have increasingly more at stake than just the monetary benefits of work (Laub & Sampson, 2003, Sampson & Laub, 1993). According to theories emphasizing controls, then, erosion in work attachment and loss of social capital are determinative for understanding the link between unemployment and crime. The long-term effects of unemployment include decreased well-being, feelings of inferiority, and hopelessness (Paul & Moser, 2009), which would be expected to increase the risk of serious offending, encompassing both crimes of property and violence. Because of the special character of employment as a source of social control as opposed to strictly income, a theoretical implication is that receipt of income support should be far less consequential for criminal offending, by comparison. Furthermore, in the Dutch welfare state, because income support is an entitlement provided irrespective



of one's criminal history, benefit recipients do not put their income at stake by committing crime.

### 3.3.1 *Gender differences in motivations and controls*

An important orienting framework for the current study comes from the realization that employment, income support, and crime are highly gendered. To begin, the notion of vulnerability differs considerably for boys and girls, with potential implications for long-term criminal behavior. Perspectives on gendered pathways point to the higher incidence of physical and sexual victimization in the early lives of vulnerable women compared to men (Belknap & Holsinger, 2006; Chesney-Lind, 1989). This can be seen in the sample of vulnerable youths selected for this study. All of the subjects were institutionalized in a juvenile justice facility in their teens. As shown in Table 3.1 and described in greater detail below, high-risk boys attract attention largely on the basis of their serious offending behavior, whereas high-risk girls warrant state intervention based, to a greater degree, on their family and abuse history. For example, physical and sexual abuse is far more pervasive among the women in this study, as is an adverse family situation (e.g., alcohol and substance abuse). Although their early life histories are by no means void of serious criminality, the role of the state in these youths' early lives is differentially tilted toward providing correction for vulnerable boys but protection for vulnerable girls.

A gendered analysis also has implications for the salience of social institutions in adulthood and consequently for the dominant forms of government entitlements. While rates of employment do not differ substantially for contemporary cohorts of young men and women, experiences in the labor market are nevertheless highly gendered, whereby men receive higher wages and are more often employed full time than women. Employment also remains central to masculine identity, especially for those living on the lower rungs of the social ladder (Messerschmidt, 1993; Willott & Griffin, 1999). If men feel more pressure to be breadwinners, then unemployment may be more criminogenic for them. In as far as income support provides an adequate monetary substitute to employment for men to meet their financial obligations, at first glance it therefore also seems conceivable that income support has a stronger crime-reducing impact for men compared to women. Yet a job is more than just a source of income, and it might be anticipated that unemployed men would turn to criminal behavior even when they receive income support, either as a supplement for their income needs or as an alternative route to assert their masculinity. So while unemployment itself may be more criminogenic for men, unemployment benefits may work less well for men than for women, because men, who derive a stronger sense of identity from being employed, may seek for ways to escape stress, boredom, or low self-esteem when they are unemployed. Feminine identity, on the other hand, remains family centered and prioritizes marriage and child rearing, both of which constitute additional forms of social control over behavior. As a result, the effects of unemployment on crime may be less outspoken for women compared to men. These gendered priorities are formalized in



the two-tiered system of income redistribution (Haney, 2000; Orloff, 1996; Sainsbury, 1996). Namely, income support for men is employment focused, whereas it is family or health focused for women. Indeed, among the youth who are the subjects of this study, the predominant form of income support experienced by men is unemployment insurance, compared to public assistance and disability benefits for women (Table 3.1).

Finally, feminist perspectives emphasize gendered deviance. In particular, deviant behavior among women is channeled more toward internalizing behavior than externalizing behavior. For example, Broidy and Agnew (1997) observe that female deviance is more firmly rooted in emotions such as depression and tends to be self-destructive (e.g., eating disorders, substance use). Male deviance, on the other hand, is rooted in angry emotions and tends to encompass behavior that is more destructive toward others (e.g., criminal behavior). Consequently, the criminal careers of vulnerable women are expected to be much more muted relative to the criminal careers of vulnerable men. This is apparent in the study sample as seen in Figure 3.1, which provides the age distribution of conviction for serious criminal behavior. A possible implication is that employment and income support will be less strongly correlated with female criminality, simply because of its relative rarity and stronger relationship with non-criminal forms of deviance.

### 3.4 REVIEW OF THE LITERATURE

#### 3.4.1 *Income support and crime*

While previous scholarship has investigated the relationship between government spending on income maintenance programs and crime at a high level of aggregation, there is a stark absence of research on the relationship between income support and criminal behavior at the individual level.<sup>3</sup> Furthermore, the research that does exist has been carried out in the US. Given that the US and many Western European countries differ greatly in their labor market and system of social benefits, and thus in their theoretical ability to affect offenders' motivations and controls, the extent to which results from these studies generalize to the Dutch context is uncertain.

The most persuasive strand of research is that on transitional aid for released prisoners. Berk, Lenihan, and Rossi (1980) evaluated the Transitional Aid Research Project (TARP), a randomized study of men and women leaving prisons in Texas and Georgia in 1976. The authors found that unemployment benefits

3 The existing research concerns the relationship between government spending on income support programs and crime in cities or metropolitan areas (e.g., Baumer & Gustafson, 2007; DeFronzo, 1997; Hannon & DeFronzo, 1998); in counties (e.g., Burek, 2006; Worrall, 2005, 2009); and in nations (e.g., Savage, Bennett & Danner, 2008; Savolainen, 2000). With a few exceptions (Burek, 2006; Worrall, 2005), these studies fairly uniformly conclude that localities with more generous income support policies, particularly public assistance programs (e.g., welfare), have lower rates of crime and especially homicide.

during the reentry period significantly reduced arrest frequency (for both property and non-property crimes) during the year following prison release. However, they also discovered that these benefits created a work disincentive, which had the countervailing effect of increasing recidivism risk indirectly through fewer weeks of employment. Thus, the net or 'reduced-form' effect of TARP on recidivism was null.

Other studies produced more favorable findings about unemployment insurance. Mallar and Thornton (1978) evaluated the Living Insurance for Ex-Offenders (LIFE) experiment in Baltimore, MD, a pilot program that provided income support and job placement assistance to men leaving prison. The income support element of the program was successful in reducing the probability and frequency of arrest (for robbery, burglary, or larceny) one year after prison release. Berk and Rauma (1983) studied the impact of unemployment benefits on recidivism among released prisoners in California who participated in prison vocational training programs and who experienced difficulty finding post-release work. They found that receipt of income support significantly reduced the likelihood of post-release recidivism during the first year when measured as parole revocation and/or return to prison. A follow-up study confirmed the significantly lower recidivism risk of program participants out to five years post release (Rauma & Berk, 1987).

### 3.4.2 *Work and crime*

A steady stream of research investigates the individual-level relationship between employment and crime (for reviews, see Bushway & Reuter, 2002; Uggen & Wakefield, 2008).<sup>4</sup> While existing studies generally find a negative effect of employment on criminal offending (e.g., Farrington et al., 1986; Uggen, 2000), it is usually not clear what aspects of work – income or informal social control – yield the most salient crime prevention benefits. A notable exception is a study by Grogger (1998) showing that, for young men, wage growth accounts for a substantial portion of the decline in criminal participation with age.

A smaller body of research examines non-wage features of employment that constitute informal social control. For instance, research by Sampson and Laub (1990) demonstrates that job stability leads to a reduction in adult criminal behavior in a sample of juvenile delinquents followed until age 32. Similarly, Crutchfield and Pitchford (1997) studied the effect of labor market segmentation and showed that young adults employed in primary sector jobs are more likely to experience job stability and are therefore less likely to engage in crime than young adults employed in secondary sector jobs. Wadsworth (2006) demonstrated that job quality is associated with less property and violent crime,

4 Another research tradition studies the macro-level relationship between economic conditions and crime rates. These studies show that crime rates are higher in areas suffering poverty and high unemployment, although the correlation tends to be stronger between unemployment and property crimes (e.g., Chiricos, 1987; Cook & Zarkin, 1985; Raphael & Winter-Ebmer, 2001).

while job stability and higher wages did not have a significant effect on crime. Furthermore, Uggen (1999) showed that high-quality jobs lowered the chances of both property crime and non-income-generating crime in a sample of ex-offenders.

Finally, Savolainen (2009) examined the effect of employment on crime in Finland and showed employment to reduce recidivism in a sample of offenders. He argued that since Finland provides generous benefits to the unemployed, the non-monetary aspects of work must make the largest contribution to desistance. An interesting feature of this study is its context: the system of income support in Finland is more comparable to the Dutch regime than the American regime.

### 3.5 THE CURRENT STUDY

In the current study, a group of previously institutionalized youths, at high risk of developing persistent criminal careers, is followed as they transition into adulthood. We examine the effects of employment and different sources of income support on these vulnerable youths' serious, property, and violent offending. Longitudinal data on convictions, income support, and employment were collected up to age 32 and combined with detailed information on personal and background characteristics, which allows us to control for possible selection effects. The following research questions and hypotheses guide the analysis.

*What are the effects of employment and income support on serious offending?* The relative influence of these two sources of income on criminal behavior will be compared. Based on theories that emphasize the financial motivation for crime, both employment and income support, because they provide a legitimate income source, should reduce criminal offending. On the other hand, following theories which emphasize the informal social control that inheres in employment, employment should reduce criminal offending more so than income support.

*Are there different effects of income support on serious offending, depending on the source of support?* Unemployment insurance, public assistance, and disability benefits will be distinguished. Given that public assistance yields the lowest monetary benefits, the effects of unemployment insurance and disability benefits on crime should be the most pronounced, by comparison. Additionally, participation in the latter two insurance systems implies some level of prior participation in the labor market, which is likely to provide a stronger stake in law-abiding behavior even during periods of unemployment or disability. On the other hand, since public assistance is intended as a family strengthening intervention, it can also be predicted to be as consequential as other forms of income support.

*Do the effects of employment and income support differ for property crime versus violent crime?* In addition to an analysis of total serious offending, crimes of property and violence will be considered separately. Support for motivational

theories will be provided by results which suggest stronger effects of employment and income support on serious property offending than on serious violent offending. On the other hand, support for control theories will be provided by equally strong effects of employment and income support on both property and violent offending, as well as stronger effects of employment compared to income support.

*Do the effects of employment and income support differ for vulnerable young men versus vulnerable young women?* Vulnerability, employment, income support, and crime are gendered, even in a highly egalitarian society such as the Netherlands. And many of these gendered constructions are observed empirically in the study sample. Unfortunately, clear predictions about whether or how gender modifies the effects of employment and income support on crime are not easily made and often produce contrary expectations.

Although there is a substantial body of research on the employment-crime relationship, individual-level research on the relationship between income support and crime is surprisingly scarce, and the existing research was carried out decades ago. In addition to filling this gap, the current study seeks to make several other contributions to scholarship. First, the study of vulnerable groups, like the institutionalized youths in the current sample, has high social priority and is much needed. Previous research shows that vulnerable youths face serious challenges on the road to adulthood. Especially during this transition period, vulnerable young people experience difficulties adapting to adult social roles such as employment, as a result of their high-risk background, their institutionalization, and their criminal record. Moreover, much of the support that these youths received from government systems as minors will end as they reach adulthood, possibly compromising their ability to successfully negotiate the transition into adulthood and exacerbating their long-term employment difficulties (e.g., Caspi et al., 1998; Verbruggen et al., 2012).

Second, it is important to study such a vulnerable group in an international context. Most research on employment, income support, and crime comes from the US, where the income support regime is vastly different from that of many European countries. Since the Dutch welfare state specifically aims to prevent crime by redistributing income, an important unanswered question is to what extent the relatively strong entitlements in the Netherlands are successful in supporting vulnerable young people and preventing them from turning to crime.

Third, this study examines the effects of income support and employment on crime in a contemporary sample of men and women. Most previous longitudinal research looks at older cohorts who came of age in a very different socio-historical context (e.g., Sampson & Laub, 1990), and it routinely excludes vulnerable women (for exceptions, see Giordano et al., 2002; Uggen & Kruttschnitt, 1998). Furthermore, labor market participation, wage schedules, and income support are highly gendered and have undergone substantial changes in recent decades. This study is thus capable of shedding light on the effects of employment and income support on crime under present-day conditions.

### 3.6 DATA

#### 3.6.1 *Sample*

The sample used in this study comprises 270 boys and 270 girls who were institutionalized in a juvenile justice institution in the Netherlands. All boys that had been discharged from the institution between January 1989 and June 1996 were selected. Because fewer girls were institutionalized in the treatment center, in order to achieve a similar sample size, all girls discharged between January 1990 and March 1999 were selected. During their stay, all subjects received treatment for problem behavior, often including delinquency. Treatment was aimed at reducing the juveniles' problematic behavior, as well as providing education.

In the Netherlands until recently, treatment in a juvenile justice institution could be imposed as a criminal law measure as well as a civil law measure. A criminal law measure is imposed when a juvenile has committed an offense and is between 12 and 18 years of age. A civil law measure is imposed when a child is under 18 years old and it is impossible to remain at home, for example, because of behavioral problems and an adverse family situation. In this sample, 56 boys (19.6%) and 7 girls (2.6%) received treatment in the institution based on a criminal law measure; all others were treated under a civil law measure.

After they had been discharged, the boys and girls were observed from ages 18 to 32. Eleven men and nine women died during the follow-up period,<sup>5</sup> and two men and four women emigrated. For these respondents, the follow-up period was shorter than 15 years. For the current study, the follow-up period begins when subjects are 18 years old, since information on employment and income support is available for the total sample from age 18 onward, and almost all subjects left the institution at or shortly before age 18. For more details on this sample, see Van der Geest, Blokland, and Bijleveld (2009) and Verbruggen et al. (2012).

#### 3.6.2 *Criminal career*

Information on criminal offending is based on convictions registered in the judicial documentation abstracts of the Netherlands Ministry of Security and Justice. These abstracts (comparable to 'rap sheets') contain information on every case that is registered with the public prosecutor's office and summarize the ensuing verdict. Information about the type of offense and offense date is available. Because offense dates were not registered before 1995, missing offense dates were imputed with the date of conviction. As with all studies using official data, the analyses presented here pertain to offenses that came to the attention of the public prosecutor and most likely underestimate the actual number of crimes committed.

---

5 The high death rate is a clear indication of the vulnerability of the subjects under study, and might be related to the high rate of psychological problems in the sample, as well as the risky lifestyles of many of the subjects.

For this study, we estimate the effects of employment and income support on three different dependent variables. First, the dependent variable is the frequency of convictions for serious offenses. Offenses are classified according to the standard classification for offenses in the Netherlands (Statistics Netherlands, 2000). Serious offending consists of violent offenses, property offenses, serious public order offenses, drugs offenses, and weapon offenses (Loeber et al., 1998). Minor offenses such as vandalism and moving violations are excluded from the analyses. In addition to the total number of convictions for serious crimes, motivated by theoretical considerations, we separately examine the effects of employment and income support on two subsets of serious offending: property crime and violent crime.

### 3.6.3 *Employment and income support*

Employment and income support data were collected from Suwinet, the national database of the Ministry of Social Affairs and Employment. The Suwinet database contains information about employment and income support benefits at the individual level from 1992 onward. In this database, the start dates and end dates of employment contracts, as well as all types of income support, are registered. In addition to Suwinet, the trade register managed by the Netherlands Chamber of Commerce was accessed. This trade register contains information about business ownership and allows us to identify subjects who are self-employed.

Although all official employment contracts are registered in the Suwinet database, we lack information about undeclared work, as well as about the type of job and whether someone was employed part time or full time. Furthermore, as the database became fully computerized from 1998 onwards, employment participation rates before that time may underestimate actual employment levels. Given the possible underestimation of employment prior to 1998, the effects of employment on crime reported in this study should be interpreted as conservative estimates.

Two sources of income are examined in this study. *Employment* is the proportion of each person-year that subjects were employed on a work contract. *Income support* is the proportion of each person-year that subjects received some kind of cash transfer. The latter is further classified into whether the income support was for unemployment, public assistance, or disability. Note that employment and income support are not mutually exclusive states in a given person-year.

### 3.6.4 *Control variables*

Time-stable and time-varying regressors pertaining to sociodemographic measures, personal characteristics, and criminal history are included in the analyses to control for possible selection effects. The sociodemographic indicators include time-varying indicators for age, marriage, and children. Information about marriage and parenthood was collected from the Dutch Municipal Population Register.



Personal characteristics were extracted from subjects' treatment files, which were compiled during their stay in the juvenile justice institution. These treatment files were constructed by a multi-disciplinary team and contain psychological and psychiatric reports, as well as reports from the Dutch Child Protection Board. Standardized and validated instruments, such as the Wechsler Intelligence Scale for Children-Revised and the Child Behavior Checklist, were used to construct reports. For this study, several background characteristics which are linked empirically and theoretically with crime, employment, and income support (e.g., Caspi et al., 1998; Gottfredson & Hirschi, 1990) were selected from the treatment files. The following personal characteristics are included in the analyses as dichotomous variables: intelligence (low intelligence versus average or above average intelligence), level of education before institutional treatment (special education or elementary education only versus average education or above average education), aggression (yes/no), sexual abuse history (yes/no), and physical abuse history (yes/no). Furthermore, a measure indicating to what extent respondents grew up in an adverse family situation is included. This variable ranges from 0 to 4 and is a sum of whether there was alcohol abuse, substance abuse, family members with a criminal history, or unemployment in the family.

The criminal history measures include time-invariant variables for the number of convictions for serious offenses prior to age 18 (as registered in the judicial documentation), the age at which subjects entered the juvenile justice institution, and the length of their confinement in the institution. The time-varying criminal history measures, constructed annually from ages 18 to 32, include dummy variables for having been convicted or incarcerated in the previous year, in addition to the total accumulated convictions and time spent incarcerated (in years) as of two years ago. These are included to distinguish the short-term, state-dependent effects of recent criminal conviction and incarceration from any long-term, cumulating effects.

### 3.7 EMPIRICAL MODEL

The effects of employment and income support on criminal conviction are estimated from ages 18 to 32. The dependent variable,  $Y_{it}$ , is a discrete random variable representing a count of the number of convictions received by individual  $i$  ( $i = 1, \dots, N$ ) at time (age)  $t$  ( $t = 1, \dots, T_i$ ). It is assumed to be distributed Poisson with the rate parameter (lambda) specified in familiar log-linear form:

$$\ln \lambda_{it} = \beta_0 + \beta_1 f(\text{Age}_{it}) + \beta_2 \text{Employment}_{it} + \beta_3 \text{Support}_{it} + \beta_4 W_i + \beta_5 X_{it} + u_i$$

In this model,  $\text{Age}_{it}$  is modeled as a quadratic,  $\text{Employment}_{it}$  is the proportion of the year employed on a work contract,  $\text{Support}_{it}$  is the proportion of the year receiving income support,  $W_i$  is a matrix of time-invariant control variables (e.g., length of stay at the institution, personality characteristics), and  $X_{it}$  is a matrix of time-varying control variables (e.g., marriage, children, prior convictions).

The model makes an exposure adjustment in order to control for ‘street time,’ meaning it accounts for the proportion of each person-year that a subject is not incarcerated (or deceased) and thus has the opportunity to commit crime. The individual effect in the equation above,  $u_i$ , represents so-called ‘unobserved heterogeneity’ in  $\lambda_{it}$  across individuals, referring to unmeasured differences in conviction risk that are stable over time (notice that it is indexed by  $i$  alone rather than by  $it$ ).

In this analysis,  $u_i$  is treated both as random and as fixed. The random-effects (RE) Poisson model assumes that  $u_i$  varies continuously in the population. Specifically, it is assumed that  $\alpha_i = \exp(u_i)$  is distributed as a gamma random variable with moments  $E(\alpha_i) = 1$  and  $V(\alpha_i) = 1/\delta$ , with  $\delta$  a parameter estimated by the model (see Cameron & Trivedi, 1986, 1998). The RE estimator is comparatively efficient, but a key assumption for consistency of this estimator is that the individual effect is orthogonal to the regressors. By way of example, it must be assumed that some unmeasured, stable trait such as low self-control is uncorrelated with an individual’s employment and income support. Violation of this assumption renders the RE estimator inconsistent because of selection bias due to time-invariant unobservables – what is referred to here as heterogeneity bias.

One way to relax this assumption is to treat  $u_i$  as fixed rather than random, giving rise to the fixed-effects (FE) Poisson model. This model is based solely on within-individual change.<sup>6</sup> In this model, the coefficients conforming to  $W_i$  in the equation above cannot be estimated, simply because time-stable regressors do not vary. The FE estimator effectively assigns each subject his or her own dummy variable, thereby relaxing any distributional assumptions about unobserved heterogeneity. While it has comparative advantages under certain circumstances, the FE model is not necessarily a panacea. It is itself inconsistent if there is selection bias due to time-varying unobservables – what is referred to here as dynamic bias. For this reason, rigorous controls for prior conviction and incarceration are included in the model.

A distinct advantage of the FE model is that the estimator is consistent when there are time-stable unobservables that are correlated with the regressors. Yet an important trade-off of FE (compared to RE) is the sacrifice of model efficiency, which can often result in type II errors of inference, not to mention that the FE model is incapable of estimating parameters for time-invariant regressors ( $W_i$ ). A test known as the Hausman test formalizes this trade-off (Hausman, 1978):

$$H = \frac{\beta_{FE} - \beta_{RE}}{\sqrt{\sigma_{\beta_{FE}}^2 - \sigma_{\beta_{RE}}^2}} \sim N(0,1)$$

6 The fixed effects Poisson estimator actually proceeds by maximizing the conditional likelihood, where conditioning is achieved by summing across each individual’s  $T_i$  observations on the dependent variable. This technically makes it a conditional fixed effects model. It necessarily excludes subjects whose observations (here, total number of convictions) sum to zero from age 18 onward, resulting in the loss of degrees of freedom.



The Hausman test for a single regressor is distributed as a standard normal random variable (i.e., it is a z-test). The numerator contrasts the consistency of the two estimators, whereas the denominator contrasts their efficiency. Because FE is less efficient than RE, the denominator will be greater than zero. If the test exceeds a threshold such as  $\pm 1.96$ , it indicates that RE is biased to such a degree that FE overcomes its inefficiency. A 'large' statistic thus constitutes a rejection of RE in favor of FE on consistency grounds. On the other hand, a 'small' statistic means either that RE is consistent or that FE is so inefficient that its consistency advantage is undermined.

Note that all models will be estimated separately for men and women, and tests of coefficient equality for the measures of employment and income support will be conducted (see Brame et al., 1998). Furthermore, separate models will be estimated for property and violent offending. For these, random- and fixed-effects logistic regression models are estimated.

### 3.8 RESULTS

#### 3.8.1 Descriptives

Descriptive statistics on the variables used in the empirical models are provided in Table 3.1.

##### **Personal characteristics**

Information from respondents' treatment files indicates that intelligence is below average for 27 percent of the men and 34 percent of the women. Almost one-third of the men and one-quarter of the women attained a level of education that was below average (special education or elementary school only). Almost two-thirds of men and women displayed aggressive behavior. Women were more often than men victim of abuse when they were young – 38 percent of the women were sexually abused and 64 percent were physically abused, while men were less often abused sexually (6.7%) and physically (32.2%). Finally, more girls (65.5%) than boys (37.8%) grew up in a problematic family environment, and the families of girls were characterized by twice as many adverse conditions, on average.

##### **Retrospective and prospective criminal careers**

For the men in our sample, the average age of entry into the juvenile justice institution was 15.6 (SD = 1.7), and they stayed in the institution for an average of 20.8 months (SD = 12.2). The average age of entry of women was slightly younger when they entered the institution (M = 15.4, SD = 1.2), and their stay was about six months shorter (M = 13.4 months, SD = 7.8). Although a minority of the sample was remanded to the institution on a criminal law measure, the majority (80.7% of men, 55.6% of women) were convicted of at least one serious offense prior to age 18. The men had a more extensive criminal history upon entering the institution than did the women.

**Table 3.1 Descriptive statistics**

	<b>Males (N=270)</b>	<b>Females (N=270)</b>
	% / Mean (SD)	% / Mean (SD)
<b>Sociodemographic indicators</b>		
Married	23.0%	20.0%
Child(ren)	35.9%	70.4%
<b>Personal characteristics</b>		
Low intelligence	26.7%	34.4%
Low school attainment	31.9%	23.0%
Aggression	64.1%	65.9%
Sexual abuse	6.7%	38.1%
Physical abuse	32.2%	63.7%
Problematic family environment	37.8%	65.6%
No. of problems in the family	0.54 (0.81)	1.13 (1.09)
<b>Criminal history prior to age 18</b>		
Convicted of serious crime prior to age 18	80.7%	55.6%
No. of convictions for serious crimes prior to age 18	5.62 (4.73)	2.36 (2.24)
Age entered institution	15.61 (1.69)	15.43 (1.20)
Length of institution confinement (in months)	20.76 (12.20)	13.42 (7.83)
<b>Criminal offending from age 18 to 32</b>		
Ever convicted of serious crime	76.3%	42.8%
Total convictions for serious crimes	12.06 (14.26)	4.29 (4.75)
No. of convictions per year for serious offenses °	0.90 (1.47)	0.17 (0.36)
Ever convicted of property crime	64.8%	30.9%
Total convictions for property crimes	10.15 (13.28)	3.96 (4.40)
No. of convictions per year for property offenses °	0.63 (1.21)	0.11 (0.29)
Ever convicted of violent crime	49.6%	23.8%
Total convictions for violent crimes	3.71 (3.20)	1.94 (1.57)
No. of convictions per year for violent offenses °	0.19 (0.41)	0.04 (0.11)
Ever incarcerated	57.4%	18.2%
Total length of incarceration (in months)	15.22 (22.09)	3.66 (8.17)

**Employment and income support**

Ever employed or received income support	94.4%	94.8%
Ever employed	85.6%	83.7%
Ever received income support	64.4%	83.3%
Ever received unemployment insurance	35.6%	19.0%
Ever received public assistance	31.1%	48.0%
Ever received disability benefits	21.1%	46.5%
Employed or received income support	0.40 (0.44)	0.59 (0.54)
Employed <sup>†</sup>	0.26 (0.40)	0.22 (0.37)
Received income support <sup>‡</sup>	0.09 (0.25)	0.29 (0.43)
Received unemployment insurance <sup>‡</sup>	0.02 (0.10)	0.02 (0.12)
Received public assistance <sup>‡</sup>	0.03 (0.17)	0.15 (0.34)
Received disability benefits <sup>‡</sup>	0.03 (0.17)	0.13 (0.32)

<sup>†</sup> Based on NT = 7,102.

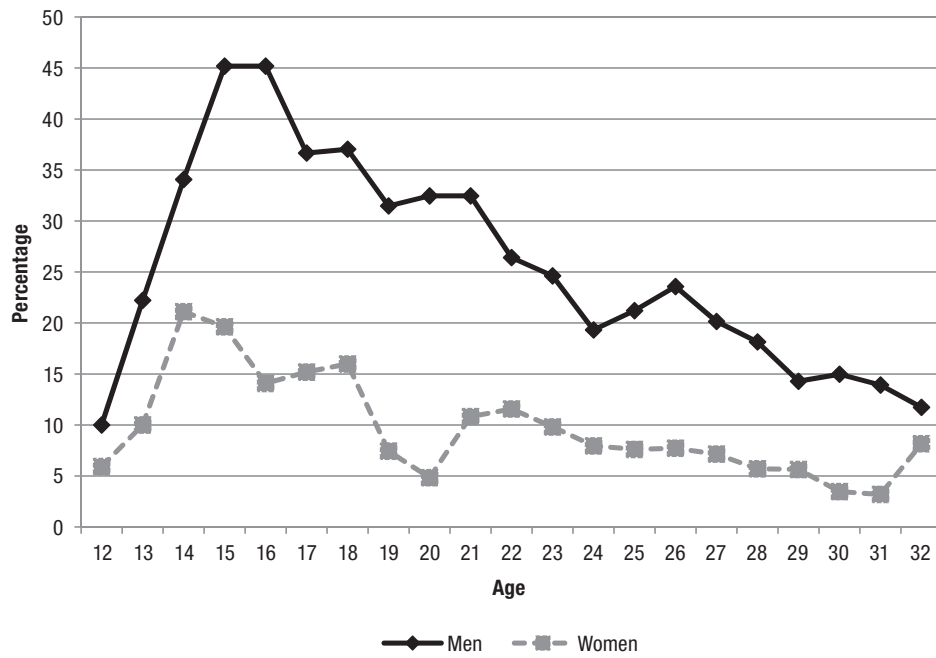
<sup>‡</sup> Based on NT = 7,983.

<sup>°</sup> Corrected for time incarcerated.

During the observation period, from ages 18 to 32, over 75 percent of men and over 40 percent of women were convicted of at least one serious offense. Among these offenders, the average number of convictions for males is almost three times as high as for females. With regard to convictions for property and violent crimes, a similar picture emerges: more men than women are convicted, and the average number of convictions is higher for men. Figure 3.1 provides the age distribution of criminal conviction for the sample, showing a peak in conviction likelihood in the middle teens (at 45% for males, 21% for females), after which there is a steady decline with age. Across age, conviction risk for females is less than half that for males.

**Employment and income support**

From ages 18 to 32, the overwhelming majority of men (85.6%) and women (83.7%) are employed at least once. However, the work careers are highly unstable, as indicated by the fact that men are employed for only 0.26 of each person-year (SD = 0.40), while the respective figure for women is 0.22 (SD = 0.37), on average. However, a large part of the sample (64.4% of men, 83.3% of women) receives income support at some point during the observation period, as well. Men more often receive income support due to unemployment, while women more often receive public assistance and disability benefits. The gender differences with respect to specific forms of income support are quite large. Furthermore, gender differences in income support in a given year are substantial – income support is received in 0.29 of each person-year among women (SD = 0.43), but only 0.09 among men (SD = 0.25).

**Figure 3.1** Age distribution of conviction for a serious criminal offense, by gender

It is noteworthy that there is also a considerable period of time, especially early on in the observation period, in which subjects are neither employed nor receiving income support.

### 3.8.2 *Effects of employment and income support on serious offending*

The empirical results showing the effects of employment and income support on serious offending are provided in Table 3.2. Random-effects models are estimated in the top panel, while fixed-effects models are estimated in the bottom panel. In Model A, the effects of employment and income support are estimated, with controls for marriage and parenthood, personal characteristics, and criminal history. In Model B, the three types of income support (unemployment insurance, public assistance, and disability benefits) are distinguished.

**Table 3.2** Effects of employment and income support on serious offending for men and women

	Males (N=270)		Females (N=267)	
	Model A	Model B	Model A	Model B
	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)
<b>Sociodemographic indicators</b>				
Age†	.72 (.71)	.65 (.71)	-.80 (1.73)	-.80 (1.73)
Age <sup>2</sup> †	-.15 (.16)	-.14 (.15)	.24 (.36)	.24 (.36)
Marriage	-.29 (.17)†	-.29 (.17)†	.15 (.25)	.15 (.25)
Child(ren)	-.11 (.08)	-.10 (.08)	-.08 (.09)	-.08 (.09)
<b>Personal characteristics</b>				
Low intelligence	.25 (.19)	.25 (.19)	.74 (.28)**	.74 (.28)**
Low school attainment	-.01 (.18)	-.01 (.18)	.12 (.30)	.12 (.30)
Aggression	-.19 (.17)	-.19 (.17)	.48 (.28)†	.48 (.28)†
Sexual abuse	.35 (.32)	.35 (.32)	-.15 (.26)	-.15 (.26)
Physical abuse	.07 (.18)	.07 (.18)	-.17 (.26)	-.17 (.26)
Problems in the family	.05 (.10)	.05 (.10)	-.02 (.13)	-.02 (.13)
<b>Criminal history</b>				
Convicted prior to age 18	.13 (.02)***	.13 (.02)***	.38 (.08)***	.38 (.08)***
Age entered institution	.02 (.07)	.02 (.07)	.40 (.12)**	.40 (.12)**
Length of institution confinement	-.01 (.01)	-.01 (.01)	.05 (.02)**	.05 (.02)**
Convicted, t – 1	.47 (.05)***	.47 (.05)***	.37 (.11)**	.37 (.11)**
Imprisoned, t – 1	.12 (.06)*	.13 (.06)*	.23 (.17)	.23 (.17)
Accumulated convictions, t – 2	-.03 (.003)***	-.03 (.003)***	-.10 (.03)***	-.10 (.03)***
Accumulated prison time, t – 2	.08 (.03)**	.08 (.03)**	-.27 (.19)	-.27 (.19)
<b>Employment and income support</b>				
Employment	-1.02 (.10)***		-1.40 (.26)***	
Income support	-.55 (.12)***		.28 (.15)†	
Employment		-1.02 (.11)***		-1.41 (.26)***
Unemployment insurance		-.17 (.33)		-1.00 (.95)
Public assistance		-.66 (.16)***		-.11 (.20)
Disability benefits		-.48 (.21)*		.60 (.18)**
Intercept	-1.78 (1.46)	-1.72 (1.46)	-8.90 (2.94)**	-8.90 (2.94)**

**Fixed-effects coefficients<sup>o</sup>**

Employment	<b>- .96 (.11)***</b>	-1.35 (.28)***
Income support	-.52 (.13)***	.22 (.16)
Employment	<b>-.97 (.11)***</b>	-1.38 (.28)***
Unemployment insurance	<b>-.002 (.34)</b>	-.68 (1.01)
Public assistance	-.67 (.16)***	-.20 (.22)
Disability benefits	-.42 (.21)*	.61 (.20)**

† p<0.10; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001.

‡ Age/10.

<sup>o</sup> N<sub>males</sub>=204, N<sub>females</sub>=113. The number of respondents in the fixed-effects models is smaller than in the random-effects models, because subjects who are never convicted from ages 18-32 are omitted. The fixed-effects coefficients in bold indicate those that are favored over their random-effects counterparts based on Hausman tests. Otherwise, the tests favor the random-effects coefficients.

Before turning to the coefficients for employment and income support, the control variables are first discussed. Men with more convictions for serious offenses prior to age 18, and who were convicted in the previous year, have a significantly higher conviction rate. Incarceration in the previous year, as well as longer total incarceration time as of two years ago, are also positively correlated with serious offending. Finally, a higher number of total convictions as of two years ago is associated with a significant but small decrease in offending. Women with a longer criminal history prior to age 18 and a conviction in the previous year have a significantly higher conviction rate. In addition, the models show that women who were older when they entered the juvenile justice institution, and who stayed longer in the institution, have a significantly higher conviction rate. With regard to personal characteristics, women with low intelligence were convicted more frequently in any given year. Similar to men, women with more total convictions as of two years ago have a significantly lower offending rate.

With regard to the effects of employment and income support, the results in Model A show that for men, both sources of income significantly decrease the rate of offending. For example, employment is associated with a 64 percent reduction in the rate of offending ( $e^{-1.02}-1 = -.64$ ), and income support with a 42 percent reduction. When we consider the type of income support (Model B), the results show that public assistance and disability benefits are both associated with a decrease in the number of convictions for serious offenses, whereas receipt of unemployment insurance benefits is uncorrelated with offending. While several of the Hausman tests favor the fixed-effects coefficients over their random-effects counterparts, the same conclusions are reached.

For women, Model A suggests that employment is also associated with a significant reduction in the rate of serious offending, by 75 percent. In contrast to men, however, income support is associated with a marginal increase in the conviction rate, by 32 percent. However, some caution is warranted because the income support coefficient is only significant at the 10 percent level. Model B reveals

that the positive effect of income support on offending for women is driven entirely by disability benefits. While the coefficient for unemployment insurance is negative and quite large, it is too imprecise to yield statistical significance due to its relative rarity. Public assistance is uncorrelated with serious offending. Note finally that all of the Hausman tests favor the random-effects coefficients.

Two preliminary conclusions can be drawn from Table 3.2. First, income matters for high-risk men. Irrespective of whether it derives from employment or from social support, men are convicted of fewer serious crimes when they are working or receiving government benefits in the form of public assistance or disability. At first glance, then, this provides support for theoretical perspectives emphasizing financial strain as an underlying motivation for criminal behavior. However, a test of the equality of the coefficients for employment and income support shows that employment is significantly more strongly correlated with offending than income support ( $z$ -test of the difference is -3.01), which provides support for social control perspectives on the importance of the labor market as a source of criminal desistance.

Second, as with high-risk men, employment for high-risk women is associated with a decrease in offending. However, income support has no beneficial impact on serious crime, and on the contrary, receipt of disability benefits is correlated with more convictions. And a test of the equality of the coefficients for employment and income support shows that employment is significantly more strongly correlated with offending than income support ( $z$ -test of the difference is -5.60). The results for women therefore support theories that emphasize the social control function of employment.

### 3.8.3 *Comparison of property and violent offending*

Table 3.3 examines the effects of employment and income support on property crime. Model A for men shows that employment and income support both lower the probability of a property crime conviction. Specifically, employment is associated with a 76 percent reduction in the probability of conviction, and income support a 59 percent reduction. When distinguishing between different types of income support in Model B, the results of the random-effects model indicate that public assistance and disability benefits have significant, negative effects on property offending. However, the Hausman test favors the disability coefficient from the fixed-effects model, which is not statistically significant.

**Table 3.3** Effects of employment and income support on property offending for men and women

	Males (N=270)		Females (N=267)	
	Model A	Model B	Model A	Model B
	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)
<b>Random-effects coefficients</b>				
Employment	-1.42 (.23)***		-1.21 (.40)**	
Income support	-.89 (.30)**		.29 (.25)	
Employment		-1.42 (.23)***		-1.19 (.40)**
Unemployment insurance		-.62 (.68)		-.35 (1.26)
Public assistance		-.88 (.40)*		-.01 (.33)
Disability benefits		-1.03 (.51)*		.50 (.30)†
<b>Fixed-effects coefficients<sup>°</sup></b>				
Employment	-1.32 (.25)***		-1.06 (.48)*	
Income support	<b>-.58 (.31)†</b>		.33 (.31)	
Employment		-1.32 (.25)***		-1.10 (.48)*
Unemployment insurance		-.18 (.72)		-.09 (1.50)
Public assistance		-.66 (.40)		-.11 (.38)
Disability benefits		<b>-.65 (.54)</b>		.85 (.43)*

Note: All control variables are included but are not shown to conserve space. The fixed-effects coefficients in bold indicate those that are favored over their random-effects counterparts based on Hausman tests. Otherwise, the tests favor the random-effects coefficients.

†  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

<sup>°</sup>  $N_{\text{males}} = 173$ ,  $N_{\text{females}} = 80$ .

For women, Model A shows that the probability of a property crime conviction is 70 percent lower for those who are employed, while income support is unrelated to conviction. In Model B, disability benefits are associated with a higher likelihood of a property crime conviction, but only at 10 percent significance. These results are further supported by the fixed-effects models.



**Table 3.4** Effects of employment and income support on violent offending for men and women

	Males (N=270)		Females (N=267)	
	Model A	Model B	Model A	Model B
	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)
<b>Random-effects coefficients</b>				
Employment	-.53 (.24)*		-.82 (.42)*	
Income support	-.02 (.28)		.26 (.28)	
Employment		-.53 (.24)*		-.79 (.42)†
Unemployment insurance		.56 (.61)		---
Public assistance		-.08 (.38)		.10 (.37)
Disability benefits		-.22 (.46)		.48 (.31)
<b>Fixed-effects coefficients<sup>°</sup></b>				
Employment	-.29 (.27)		-.60 (.53)	
Income support	.04 (.30)		<b>-.42 (.37)</b>	
Employment		-.30 (.27)		-.60 (.53)
Unemployment insurance		.95 (.67)		---
Public assistance		-.18 (.40)		-.55 (.52)
Disability benefits		-.07 (.51)		-.03 (.47)

Note: All control variables are included but are not shown to conserve space. The fixed-effects coefficients in bold indicate those that are favored over their random-effects counterparts based on Hausman tests. Otherwise, the tests favor the random-effects coefficients.

†  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

<sup>°</sup>  $N_{\text{males}} = 132$ ,  $N_{\text{females}} = 64$ .

<sup>oo</sup> Because there are no women that were convicted of a violent offense and received unemployment benefits in the same year, income support due to unemployment was excluded from Model B for women.

Finally, with regard to violent crime, Table 3.4 indicates that employment significantly reduces the likelihood of conviction for a violent crime among both men and women (by 41% and 56%, respectively), while income support is uncorrelated with conviction for both samples. It is also notable that the coefficients in the male violent crime model are smaller than their counterparts in the male property crime model. For example, for men, employment lowers the risk of property crime by 76 percent and violent crime by 41 percent (Model A, random-effects coefficients in Tables 3.3 and 3.4, respectively). While both coefficients are statistically significant in their respective models, the magnitude in the property crime model is substantially larger. The same is true with respect to income support, which is more salient for property crime than violent crime. While suggestive, because these coefficients are estimated in models which are not independent, we are unfortunately unable to perform a formal test of their differences.

To summarize, when the models are estimated separately for property and violent offending, the results provide support for a combined motivational and control explanation for the salience of employment for high-risk men. Both employment and income support are associated with lower risk of property crime, whereas only employment is associated with lower risk of violent crime. Furthermore, informal comparisons of the magnitude of the coefficients indicate that employment and income support are more strongly correlated with property offending than violent offending. For high-risk women, on the other hand, the finding that employment lowers the risk of property and violent crime, while income support is largely unrelated to offending, provides support for theories that underscore the informal social control associated with employment, and not merely income.

### 3.9 SUMMARY AND IMPLICATIONS

This study was motivated by four research questions, for which we are in a position to provide provisional answers. *What are the effects of employment and income support on serious offending?* Our expectation from motivational theories was that both employment and income support would reduce criminal behavior, whereas our expectation from control theories was that employment would result in larger reductions in crime compared to income support. Both of these expectations are borne out to different degrees. The findings demonstrate that both employment and income support significantly lower the frequency of serious convictions among vulnerable men, employment more so than income support. By comparison, only employment significantly lowers conviction frequency for vulnerable women, while income support marginally increases convictions. Among the study males, then, there is support provided for both motivational and control theories. Among the study females, on the other hand, there is support provided for control theories and no evidence for motivational theories.

*Are there different effects of income support on serious offending, depending on the source of support?* Among men, public assistance and disability benefits were inversely correlated with conviction frequency, whereas unemployment insurance was unrelated to crime, a finding which at first came as a surprise. While unemployment insurance is the most common form of income support received by the study men (as indicated by the 'ever received' figures in Table 3.1), it is also readily apparent that the duration of this form of support is much shorter in length than the duration of disability benefits and public assistance (as judged by current receipt in Table 3.1 or the proportion of any given year in which the benefit is received). Considering that the coefficient for unemployment insurance for the study women is sizable but not statistically significant indicates that it is partly an artifact of a 'weak signal,' rendering any lack of an effect inconclusive because of low precision, at least for this form of income support. Among women, however, all indications are that those who meet the eligibility

criteria to receive disability insurance are in fact more crime prone. This was not anticipated in advance, and it is a result to which we return below.

*Do the effects of employment and income support differ for property crime versus violent crime?* Our expectation from motivational theories was that employment and income support would be more strongly correlated with property offending than with violent offending, whereas our expectation from control theories was that these sources of income would correlate equally strongly with property and violent offending. Again, both of these expectations are borne out to varying degrees. The fact that employment is correlated with lower violent and property crime risk, among both women and men, strengthens the social control explanation. On the other hand, the fact that employment is apparently more strongly correlated with property offending, and income support among men is correlated only with property offending, lends support to the motivational explanation.

*Do the effects of employment and income support differ for vulnerable young men versus vulnerable young women?* As indicated in the foregoing summary, the findings from this sample of vulnerable youths suggest gender symmetry with respect to the salience of employment in the criminal career, but gender asymmetry with respect to the receipt of government transfers. There is evidence from the study sample that women who receive disability benefits are eligible for them on the basis of psychiatric problems. For example, information from the treatment files shows that these women possess a more problematic personal and family background. This points to the so-called gender paradox in crime: while women are less likely than men to engage in crime, those women who do engage in crime often exhibit more severe socio-psychological problems than criminal men (Eme, 1992). Prior research, for example, has demonstrated that female offenders have more mental health problems than male offenders and that their mental health problems are related to criminal behavior (Palmer, Jinks & Hatcher, 2010). It is therefore plausible that eligibility for, and receipt of, disability benefits serves as an indicator of a highly sensitive period in the lives of vulnerable women, when psychiatric problems are likely to have peaked and the risk for crime is greatest.

It is worth considering the extent to which the findings from this study, carried out in the Netherlands, can be generalized to other societal contexts. In the typology of Esping-Andersen (1990), welfare regimes in Anglo-Saxon countries, such as the US and the UK, can be classified as liberal regimes in which eligibility criteria are stricter and benefit levels are lower. In light of differences in the social safety net, it could be that income support in these countries is differentially related to criminal offending because, for example, the benefit levels might be insufficient to relieve financial strain to lessen the attractiveness of crime. However, research carried out in the US in the 1970s and 1980s suggests strongly that income support (in the form of unemployment insurance) does lower the risk of criminal behavior among ex-prisoners (e.g., Berk & Rauma, 1983; Mallar & Thornton, 1978; Rauma & Berk, 1987; for null evidence, see Berk et al., 1980). It is also worth considering the extent to which extensive welfare reforms, such as those experienced in the 1990s in the US that have

become a model for the most recent reform discussion in the Netherlands today, impact the long-term risk of criminal behavior.

It is also worth emphasizing that the findings from this study relate to a particularly vulnerable sample of youths who are likely to impose major costs, irrespective of social context, on public safety and public spending on social programs. For example, a large proportion of the study sample engages in serious criminal behavior during adulthood – 3 in 4 men and 2 in 5 women – confirming their status as being at high risk for the development of chronic criminality, in light of their vulnerable background. Furthermore, a majority of the sample relies on some form of income support from the Dutch government during adulthood – 3 in 5 men and 4 in 5 women. Surprisingly, and contrary to the explicit aims of the Dutch welfare state, there is a considerable proportion of time in which some subjects were neither employed nor receiving benefits. This suggests that some vulnerable youths have officially ‘fallen through the cracks’ during the transition to adulthood, reinforcing the need for a long-term study of such groups and the need to study ways to fully integrate them into conventional society.

### 3.9.1 *Study limitations*

This study is the first in the Netherlands, and one of the few worldwide, which examines the effects of employment as well as income support on criminal behavior at the individual level. However, some limitations must be noted. First, while all formal employment contracts and income support benefits are registered in official databases, information about undeclared work, as well as information about unofficial (e.g., familial) financial support, is regrettably unavailable. With respect to undeclared work, vulnerable youths can end up working on the informal labor market, for instance, because their criminal record limits opportunities for conventional employment (Pager, 2003). In addition, some young people may live with someone who is capable of supporting them financially. The existence of undeclared work and unofficial financial support might partly explain why there is a considerable amount of time in which subjects receive no income from either work or government benefits. Results from a follow-up study recently conducted on this sample indicate that some of the men and women indeed received pay from undeclared work or financial support from relatives or a partner (Verbruggen, Van der Geest & Blokland, 2014).

Second, we relied on information from the treatment files, constructed during the youths’ stay in the institution, for our measure of educational attainment. This provides us with information about educational attainment in adolescence only, which is a weakness if some young people acquire further education after leaving the institution. Since a large proportion of the person-years in which subjects are neither employed nor receiving income support are in the early years of the 18-32 observation window, it suggests that some subjects might indeed be in school. Since education is an important possible confounder of the relationships between employment, income support, and crime, it is unfortunate that we did not have access to a more accurate measure of attainment in this study.

Third, by using officially registered data, the intermediate causal mechanisms at play in the relationships between employment, income support, and crime ultimately remain unknown. In-depth self-report data or qualitative interviews would provide insight into these mechanisms. For example, in a sample as high risk as the one under study, it is possible that addiction problems are associated with unemployment and crime. Unfortunately, we lack information on alcohol and drug abuse. Furthermore, additional detail about income support (e.g., the amount of money received) or about the backgrounds of recipients might help explain the unexpected finding that there are different effects of different types of income support, and the effects are gendered.

Finally, we used a calendar-year reference window as the temporal unit in this study, which is not sufficiently fine-grained to study transitions among states of employment, income support, and crime. For example, given that high-risk individuals often have erratic work histories, the information conveyed by year-long reference windows might be too crude to untangle the timing of the work-crime relationship. It would thus be desirable in future research to collect information at a monthly level rather than yearly level.

### 3.10 CONCLUSION

This study used individual-level, longitudinal information on a sample of vulnerable youths (N=540) who were treated in a Dutch juvenile justice institution in the 1990s and who, because of a multi-problem background, were at increased risk of experiencing difficulties in the transition to adulthood. Officially registered data were collected on criminal convictions, employment contracts, and government benefits from ages 18 to 32. The question driving the analysis concerned the differential effects of employment and types of income support on serious criminal offending by high-risk men and women.

In a series of panel (random- and fixed-effects) models, the results revealed that employment was inversely correlated with serious offending in general, and with both property and violent offending in particular. This was consistently observed among both high-risk men and women. Receipt of income support, on the other hand, was inversely correlated with serious offending among high-risk men, and only with respect to property offending. While receipt of income support was largely uncorrelated with serious offending among high-risk women, this masked a positive correlation between the receipt of disability benefits and serious offending.

The uniform impact of employment on long-term criminal behavior in this sample provides support for social control explanations of the role of the labor market in crime desistance (Laub & Sampson, 2001). Even though women are more likely to work part time and might attach less value to work than men (De Beer, 2005; Harding & Sewel, 1992; Rossi, 1998), the results are equally strong with respect to women's serious offending. Put simply, more time spent working strengthens a person's ties to conventional behavior, over and above the remunerative function of employment. Despite the instability of adult work

experiences in this sample, strengthening attachment to the labor market therefore has the potential to alter the long-term risk of crime among vulnerable young men and women.

This study also provides some support for the experience of unemployment as a source of financial strain that can increase the risk of property offending, consistent with motivational or income explanations of the salience of employment in the criminal career. In particular, some forms of income support have the added benefit of lowering the attractiveness of crime. Yet this relationship is gendered, as it was observed only among high-risk men. In fact, high-risk women who receive disability benefits showed a higher level of criminal behavior. Given these women's relatively high rate of government disability support, it will be important to closely examine their life circumstances during the periods when they are beneficiaries.

To close, this study provides a first step in understanding how the Dutch welfare state impinges on individual criminal behavior. The conclusions pertain to a sample of young people from troubled backgrounds, whose labor market participation is below average, whose employment careers are highly unstable, and who are more highly dependent on the Dutch welfare state. While some traditional life-course transitions – marriage and fertility – were not particularly strong correlates of serious criminal offending in this sample (see also Giordano et al., 2002), employment was strongly and consistently correlated with reduced crime risk among both men and women. Yet this study points to an additional change agent in the criminal careers of vulnerable men. Namely, some forms of government transfer have the capacity to substantially alter the risk of crime. Since this is a relatively unexplored field of inquiry in criminology, future research including other welfare regimes will be necessary to shed light on why and how the criminal behavior of vulnerable citizens is jointly affected by employment and income support.





## EFFECTS OF UNEMPLOYMENT, CONVICTION, AND INCARCERATION ON EMPLOYMENT. A LONGITUDINAL STUDY ON THE EMPLOYMENT PROSPECTS OF DISADVANTAGED YOUTHS

### Abstract

*This study aims to investigate the effects of a history of unemployment, conviction, and incarceration on the likelihood of being employed in a sample of disadvantaged youths. All youths (N=540) were institutionalized in adolescence. From ages 18 to 32, official data were available on employment, convictions and incarceration. To control for unobserved heterogeneity, fixed effects models are used to estimate the effects of unemployment, conviction, and incarceration on the likelihood of employment. Results show that for men, a criminal background does not damage employment prospects when a history of unemployment is taken into account, while for women, a criminal record does impact employment chances in addition to the detrimental effects of unemployment. When only looking at the years in which individuals were unemployed, results show that a history of unemployment, rather than a criminal background, decreases the probability of finding employment in the subsequent year for both men and women. These findings suggest that for disadvantaged boys and girls with poor prospects in the labor market from the outset, a history of unemployment precludes them from being hired, while their criminal background does not further damage their already limited employment prospects.*

### 4.1 INTRODUCTION

For formerly institutionalized youths, labor market entry is particularly important for a successful transition into adult life (Chung, Little & Steinberg 2005). Being employed structures their daily routines, provides them with a source of social control, and helps them to construct and maintain conventional identities. Yet, institutionalized youths' job prospects often are low for several reasons. First, in general these youths come from disadvantaged family environments, with few economic and social resources, few job contacts, and little access to legitimate job networks, rendering the social capital these youths have at their disposal to help them find conventional employment severely compromised

(Hagan, 1993; Osgood et al., 2005). Second, institutionalized youths usually attained only lower-level education or dropped out of school altogether. This means these youths start their employment career with little human capital as well. As a result, work experience quickly becomes their biggest asset. Finally, when applying for a job, these youths can experience difficulties due to the stigma associated with their involvement in delinquent behavior and prior institutionalization (Osgood et al., 2005).

For these reasons, formerly institutionalized young adults are at high risk of early unemployment. Early unemployment bereaves them of the opportunity to invest in work-relevant social and human capital, while the little human capital they did have starts to deteriorate, thereby decreasing their chances to be hired even further. Early unemployment can especially be detrimental since these youths usually work secondary labor market jobs and for these low-skilled jobs, work experience is the most important requirement (Wiesner et al., 2010). As such, experiencing unemployment not only is a negative outcome by itself but also damages future employment chances (e.g., Luijckx & Wolbers, 2009).

Given their serious behavioral problems during adolescence, these youths are also at increased risk of engaging in delinquency and crime and of extending their criminal careers into adulthood (Blokland & Palmen, 2012). Official reactions to adult crime, such as conviction and incarceration, can further decrease their future employment chances. Adult convictions may officially bar them from certain job opportunities (e.g., Bushway, Nieuwbeerta & Blokland, 2011), while potential employers may be unwilling to hire ex-detainees (Pager, 2003). The 'knifing off' of conventional opportunities and the accumulation of disadvantage resulting from the detrimental effects of official reactions to crime figure prominently in life-course explanations of both persistence in crime (Sampson & Laub, 1997) and differences in middle age 'life failure' between offenders and non-offenders (Piquero, Farrington, Nagin & Moffitt, 2010).

Yet, given their disadvantaged background, the question can be raised as to what extent convictions and incarceration have an additional effect on the – already limited – employment prospects of institutionalized youths. Does being convicted or incarcerated damage their employment prospects? Or is their lack of employment experience a better predictor for future labor market success? Likely, answers to these questions depend in part on certain features of the national socio-legal context, like the social security system and the incarceration rate. Since most research on the effects of conviction and incarceration on employment outcomes was carried out in the US, little is known about the relationship between conviction, incarceration, and employment probability in countries with a different penal climate, such as the Netherlands. Therefore, this study investigates the relationship between unemployment, conviction, incarceration, and employment probability in a sample of Dutch vulnerable youth as they transition into adulthood. Longitudinal data on convictions, incarceration, and (un)employment, collected up to age 32, will be used to answer the following research questions for men and women separately: First, what is the effect of a history of unemployment on the probability of employment? Second, what is the effect of a conviction on the probability of employment? Third, what

is the effect of incarceration, over and above the effect of a conviction, on the probability of employment? And fourth, what is the effect of conviction and incarceration, over and above the effect of prior unemployment, on the probability of employment?

## 4.2 THEORETICAL FRAMEWORK

### 4.2.1 Effects of unemployment on employment

Experiencing a period of unemployment has a negative effect on subsequent employment chances as well as on future earnings when reemployed (Arulam-palam, Gregg & Gregory, 2001; Luijkx & Wolbers 2009). In labor economics, the detrimental effects of unemployment experience on future work prospects are referred to as the 'scarring' effects of unemployment (Heckman & Borjas, 1980). Scarring effects of unemployment can be explained by two theories: signaling theory and human capital theory.

Signaling theory argues that when an employer is confronted with a job applicant, he has only limited knowledge of the true capabilities of the potential employee, and therefore, he has to rely on observable characteristics of the individual which give an indication of the worker's productivity (Spence, 1973). Based on a combination of *indices*, which are stable characteristics such as gender and race, and *signals*, which are alterable characteristics such as education and work experience, an employer decides whether or not to hire an individual. Whereas work experience is a positive signal, a gap in one's employment history signals negative characteristics, such as low productivity, inferior worker quality, and bad job performance. The decision to hire is thus negatively influenced by the *stigma* attached to unemployment.

Whereas the signaling explanation for the negative effects of unemployment on one's labor market prospects pertains to how potential employers view an individual with a history of unemployment, the second explanation relates to the detrimental effects that a spell of unemployment can have on a person's own skills and experience. According to human capital theory, investments in human capital (including education, work experience and on-the-job training) increase one's market value and thus the chance of being employed (Becker, 1964). Employment offers the opportunity, such as via on-the-job training, to invest in both *specific* human capital, which generates skills that are useful in only one firm or industry, and *general* human capital, such as general work experience, skills, and knowledge, which increases one's productivity in many firms. Unemployment leads to human capital depreciation, since it not only undermines the accumulation of human capital but also because existing skills can deteriorate as they go unused, thereby decreasing an individual's employability.

In sum, a *spell* of unemployment on one's resume is a bad signal for an employer. In addition to this, the longer the *duration* of unemployment, the stronger the

negative signal, as well as the more detrimental this is for one's human capital, resulting in lower employment chances.

#### 4.2.2 *Effects of conviction and incarceration on employment*

In addition to the adverse effects of a history of unemployment on a person's future employment chances, being convicted or having a history of incarceration is assumed to have detrimental effects on one's employment prospects as well. To begin with, classic labeling theories argue that people who engage in crime and have had contact with the criminal justice system are publicly labeled as deviant (Becker, 1963; Lemert, 1967). These individuals are viewed by others as different and assumed to have undesirable characteristics. Research has identified two main mechanisms through which deviant labeling may influence one's chances of success in conventional institutions such as in the labor market (Apel & Sweeten, 2010; Liska & Messner, 1999; Lopes et al., 2012).

First, a criminal label can block access to conventional opportunities, such as legitimate job networks. Employers are reluctant to hire ex-offenders (Boshier & Johnson, 1974; Holzer, Raphael & Stoll, 2003; Pager, 2003) not necessarily because of the risk of crime in the workplace but because a criminal history is associated with negative characteristics, such as aggressiveness or untrustworthiness, and thus signals a bad employee. Especially in sectors such as service or retail, where an important part of the job concerns contact with customers or handling cash, these perceived negative characteristics can be a reason not to hire an ex-offender. These negative signals appear to matter less to an employer in industries such as construction and manufacturing (Holzer et al., 2003).

Second, labeling is also thought to influence the way people view themselves. Because others see and treat an individual as deviant, the individual tends to conform to the stereotypical image that others have of him or her and gradually develop a criminal self-concept, thereby producing a self-fulfilling prophecy (Becker, 1963). As a result, these individuals might expect to be rejected by employers and lose faith in finding a job and are therefore more likely to only apply for low-quality jobs or to withdraw themselves from the (formal) labor market completely.

In sum, according to labeling theory, conviction and incarceration are thought to have negative effects on the employment career due to the *stigma* that a criminal background constitutes. In addition, incarceration can also negatively affect employment prospects through the process of human capital deterioration. As with unemployment, human capital accumulation is interrupted when an individual is incarcerated. The opportunity to gain specific work experience on the job is terminated, and the longer the spell of incarceration, the more likely it is that existing general skills erode (Holzer et al., 2003; Kling, 2006). However, when inmates have the opportunity to participate in education and work programs in prison, this can increase rather than decrease their human capital.

#### 4.2.3 *Effects of unemployment, conviction, and incarceration on employment for men and women*

It is unclear whether the effects of unemployment, conviction, and incarceration on employment chances are equal or different for men and women. On the one hand, women tend to have less opportunities to invest in work-related human capital than men, because they are more often employed in part-time and lower-quality jobs. Also, their human capital accumulation may be jeopardized when their labor market participation is interrupted by taking care of children (Luijkx & Wolbers, 2009; Mooi-Reçi, 2008). As a result, women in general have weaker labor market attachment than men. On the other hand, as employers are aware of these gender differences, for women, their relative lack of human capital may play a less important role in the hiring decision, especially for low-skilled, low-paid, or temporary jobs (Barron, Black & Loewenstein, 1993; Blau & Kahn, 2000). Combined, this would suggest that compared to men, women are more likely to experience periods of unemployment but that the impact of unemployment on future careers prospects for them is less.

Alternatively, there are indications that women experience more stigma than men. Females are less involved in crime than males, but the women that do engage in criminal behavior might be judged more harshly (Bartusch & Matsueda, 1996; Davies & Tanner, 2003; Hagan, McCarthy & Foster, 2002). In addition, low-skilled women usually work in service or retail, and for these jobs, certain personality traits such as being friendly are deemed more important, for example, because of contact with customers. Since a criminal label is thought to signal negative personal characteristics, criminal women are less likely to be hired for these kinds of jobs. Low-skilled men in general apply for jobs without a service or public function, such as jobs in construction, where these assumed negative characteristics matter less (Davies & Tanner, 2003; Holzer et al., 2003; Tanner, Davies & O'Grady, 1999). Although a stereotypical distinction between typical male and female professions is thought to decline over the past decades, this is particularly true for higher-qualified employment, while occupational segregation by gender still holds for low-skilled jobs (Blau, Brummund & Liu, 2013; Dolado, Felgueroso & Jimeno, 2001). This would suggest that due to stigmatization and scarring effects, conviction and incarceration may be more damaging to women's employment chances than to those of men.

### 4-3 EMPIRICAL FINDINGS

#### 4.3.1 *The effects of unemployment on future (un)employment*

There is a large body of labor economics literature showing the detrimental effects of unemployment on future employment outcomes. In general, research has shown that unemployment has persistent negative effects on individuals' subsequent employment career, in terms of a decreased likelihood of reentering the labor market (e.g., Luijkx & Wolbers, 2009), an increased chance of repeated

job loss (e.g., Gregg, 2001), and labor market reentry with lower job quality (e.g., Layte, Levin, Hendrickx & Bison, 2000) or lower wages (the so-called 'wage penalty') (e.g., Arulampalam, 2001). To illustrate, various studies have established a longitudinal association between previous and future unemployment. In the US, Ruhm (1991) studied a sample of workers who lost their job due to plant closure and mass layoffs, and found that displaced workers were more likely to re-experience unemployment than their counterparts. In addition, Omori (1997) demonstrated that an extended history of unemployment increases the duration of future unemployment. Similarly, in the UK, previous unemployment was found to increase the probability of being unemployed (Arulampalam, Booth & Taylor, 2000; Gregg, 2001; Narendranathan & Elias, 1993). In addition, studies that examined the reemployment chances of unemployed individuals usually found that reemployment probability declines as unemployment duration prolongs (Böheim & Taylor, 2000; Jackman & Layard, 1991; Van den Berg & Van Ours, 1994). Moreover, there is ample evidence for the negative effects of unemployment on wages and earnings when reemployed (Arulampalam, 2001; Gregg & Tominey, 2005; Gregory & Jukes, 2001; Jacobson, LaLonde & Sullivan 1993; Ruhm, 1991; Stevens, 1997). All in all, individuals who experience multiple spells of unemployment are at risk of becoming trapped in a downward spiral and ending up in unstable, low-quality, and low-paying jobs or even long-term unemployment (Böheim & Taylor, 2002; Gregg & Tominey, 2005; Jacobson et al., 1993; Layte et al., 2000; Stevens, 1997).

Most employment research has been carried out in the US. Western European countries such as the Netherlands, however, are characterized by systems of social security and labor market policies very different from that in the US. Still, the few studies that have been conducted in Western Europe indicate that negative effects of unemployment exist in non-US contexts as well. For example, past unemployment is found to cause future unemployment in Germany (Mühleisen & Zimmermann, 1994). Similarly, in the Netherlands, a study by Layte et al. (2000) demonstrated that past unemployment increases the risk of future unemployment for Dutch men and women. In addition, Luijkx and Wolbers (2009) showed that unemployment duration has a negative effect on subsequent employment chances of men and women in the Netherlands. They concluded that this negative effect of unemployment could be explained by human capital depreciation. Yet another Dutch study by Mooi-Reçi (2008) showed that the number of previous unemployment spells had the largest effect on the probability of re-experiencing unemployment, in addition to the effect of the occurrence and duration of unemployment, providing evidence for signaling theory.

Whereas some studies find more or less similar results for men and women (Burgess, Propper, Rees & Shearer, 2003; Layte et al., 2000), some studies find evidence for gender differences in unemployment scarring. For example, Gregg (2001) found only minor persistence in unemployment for women, while for men, a strong effect of early unemployment on future unemployment experience was found. In contrast, the Dutch study by Mooi-Reçi (2008) found that



the probability of future unemployment as well as the wage penalty is higher among women than among men.

#### 4.3.2 *The effects of conviction and incarceration on (un)employment*

While labor economic studies have identified detrimental effects of prior unemployment on future employment outcomes, criminological studies have found that a history of conviction and incarceration can affect labor market success as well. There is a growing body of literature on the effects of criminal behavior and the subsequent official reactions such as a conviction or incarceration on all kinds of occupational outcomes. In general, these studies show detrimental effects of a criminal history on several employment outcomes. For example, crime and its consequences decrease the chances to find work, experience job stability, and have good earnings (e.g., Bernburg & Krohn, 2003; Bushway, 1998; Fagan & Freeman, 1999; Pager, 2003; Sampson & Laub, 1993).

Experimental studies carried out in the 1960s and 1970s showed that employers are reluctant to hire convicted offenders (Schwartz & Skolnick, 1962; Boshier & Johnson, 1974). For example, an experiment in the Netherlands found that application letters in which a conviction was mentioned received significantly less positive responses from companies than applications with no reference of a criminal record (Buikhuisen & Dijksterhuis, 1971). More recently, experimental studies demonstrated that applicants who reported a history of incarceration were less likely to be considered by employers, especially if applicants were black (Pager, 2003; Pager, Western & Sugie, 2009).

In addition to experimental designs, longitudinal data have been used to examine effects of conviction and incarceration on employment outcomes. Most of these studies examine a relatively short follow-up period and look at employment outcomes in young adulthood. For example, Bernburg and Krohn (2003) showed that a formal sanction in adolescence was associated with unemployment in young adulthood. In addition, Nagin and Waldfogel (1995) found that a conviction decreases job stability for young offenders. Furthermore, the few longitudinal studies that follow people well into their forties found that those convicted experienced more difficulties entering and remaining in the labor market (Farrington et al., 2006; Nilsson & Estrada, 2011; Piquero et al., 2010).

Studies that examine the effects of incarceration on employment usually find that a spell of confinement has negative effects on employment probability, job stability, and earnings after release (e.g., Fagan & Freeman, 1999; Freeman, 1991; Pettit & Lyons, 2009; Sampson & Laub, 1993; Western & Beckett, 1999). For example, Apel and Sweeten (2010) found incarceration in late adolescence or early adulthood to have a negative effect on the probability of employment over and above the effect of prior convictions, seemingly favoring a human capital over a signaling explanation. In addition, Sampson and Laub (1993) demonstrated that incarceration during adolescence has a negative effect on job stability through age 32. Moreover, studies that looked at both men and women showed that incarceration as juvenile or young adult was associated with more



job instability thereafter, for men as well as for women (Davies & Tanner, 2003; Lanctôt, Cernkovich & Giordano, 2007).

However, Kling (2006) found short-term positive effects of incarceration length on subsequent employment in a sample that comprised mostly males, while no long-term significant effects of incarceration were found. In addition, LaLonde and Cho (2008) studied a sample of female ex-prisoners and demonstrated that incarceration did not harm their employment outcomes; some groups of women even showed higher employment rates after their incarceration spell. These positive effects of incarceration on employment might be explained by participation in work release programs and seem to diminish over time.

In sum, most studies on the effects of convictions and incarceration on employment outcomes show that formal sanctions are associated with difficulties (re) entering the labor market. Several studies argue that the negative effects of convictions or incarceration on employment outcomes indicate that official reactions to crime provoke stigma and negative beliefs on the part of employers (e.g., Bernburg & Krohn, 2003; Fagan & Freeman, 1999), while others explain their findings in terms of human capital deterioration (e.g., Apel & Sweeten, 2010).

#### 4.4 THE CURRENT STUDY

This study examines the effects of conviction, incarceration, and past unemployment on the probability of being employed in a sample of formerly institutionalized men and women characterized by a vulnerable background. This study contributes to the existing body of literature in several ways.

First, by using theories from both labor economics (signaling and human capital theory) and criminology (labeling theory), we investigate how conviction and incarceration damage employment chances in a sample of vulnerable youths, over and above the effects of a history of unemployment. In previous studies, the effects of (unobserved) heterogeneity in individual characteristics could not be ruled out completely. In the current study, we take several measures of past unemployment into account and use a fixed effects model to account for unobserved heterogeneity as we examine the relationship between unemployment history, criminal history, and employment probability.

Second, previous research on the effects of crime on employment usually has a relatively short follow-up period (but for exceptions, see Lopes et al., 2012; Piquero et al., 2010; Sampson & Laub, 1993). The current study follows individuals for over a period of 15 years, spanning the entire emerging adult period during which transitions into adult roles such as employment are most likely to occur (Arnett, 2000). Analyzing a sample of disadvantaged youths well into adulthood allows us to investigate to what extent employment outcomes are affected by prior unemployment or a criminal history.

Third, the sample used in this study consists of both men and women. As previous research focused primarily on males, not much is known about the extent

to which conviction and incarceration, in addition to unemployment history, affect employment outcomes for females and males in the same way.

Finally, we study the effects of conviction and incarceration on employment in a Dutch context, whereas most previous research has been done using data from the US or the UK (but see for recent exceptions Nilsson & Estrada, 2011; Van der Geest, 2011). The penal climate in Western European countries such as the Netherlands differs greatly from that in Anglo-Saxon countries, and especially the US, because of which it is still unclear to what extent results from US- and UK-based studies can be generalized to the Netherlands. For example, whereas in the US employers can turn to private companies for criminal history information (Bushway, Briggs, Taxman, Thanner & Van Brakle, 2007; Raphael, 2010), in the Netherlands, background screening is regulated by the government. For some types of jobs, such as in the police force, education, and taxi driving, a criminal record check is legally required, and for other jobs, employers can ask a job applicant for a certificate of good conduct through the ministry of Security and Justice. A person's criminal record is then checked for any offense in the past four years, and for sexual offenses for an unlimited period of time, and is assessed on its relevance for the type of job that the person has applied for (Boone, 2012, Valk et al., 2006). A certificate of good conduct is issued when a person is considered to impose no risk with respect to practicing that specific job. Furthermore, prison rates in the Netherlands are substantially lower than in the US. To illustrate, in the Netherlands, from the 1970s onward, prison rates rose to a peak of 134 inmates per 100,000 inhabitants in 2005, declining again thereafter to 84 per 100,000 in 2011 (Aebi & Delgrande, 2011; Linckens & De Looft, 2013). In the US, the 2011 prison rate was 716 per 100,000 inhabitants (International Centre for Prison Studies, 2013). In addition, prison sentences in the Netherlands are relatively short, and the penal system is more focused on rehabilitation than in the US. As we examine the effects of a criminal history on employment using Dutch data, our results speak on the generalizability of prior findings in a less punitive climate.

The following hypotheses are derived from the theoretical framework outlined above. With regard to unemployment history, it is expected, based on signaling theory, that being unemployed, experiencing multiple unemployment spells, and experiencing extended unemployment duration decrease the likelihood of employment. Following human capital theory, it is expected that in particular an extended duration of unemployment further decreases employment probability, since it is assumed that it takes some time for human capital to deteriorate.

In testing the effect of a criminal history on employment outcomes, conviction and incarceration are expected to reduce the chance of employment, due to labeling effects. In addition to this, as prison stays increase in length, they are expected to further diminish employment chances because – similar to a longer spell of unemployment – human capital deteriorates over time.

Given that periods of unemployment are more common and therefore less scarring for women compared to men and that crime and the convictions and incarcerations resulting from that are more common among men, women's

employment careers are expected to be influenced less by previous unemployment, but more so by conviction and incarceration than the employment careers of men.

## 4.5 DATA AND METHODS

### 4.5.1 *Sample*

For this study, we use data from the NSCR 17Up study, a longitudinal study following a sample of vulnerable youths well into adulthood.<sup>1</sup> The sample of the 17Up study comprises 270 boys and 270 girls who were institutionalized in a Dutch judicial treatment institution for juveniles in the 1990s. The boys had been discharged from the institution between 1989 and 1996, the girls between 1990 and 1999. These juveniles may be considered a fairly seriously troubled group of juveniles (Boendermaker, 1999), often displaying serious behavioral problems including delinquency. Those included in the 17Up study can thus be considered to be at high risk for experiencing trouble taking up adult social roles, like employment, and for developing a prolonged pattern of criminal behavior that continues well into their adult years.

In the Netherlands, until recently, treatment in a judicial treatment institution could be imposed as a criminal-law measure as well as a civil-law measure. A criminal-law measure could be imposed when a juvenile has committed an offense and is between ages 12 and 18. A civil-law measure could be imposed when a child was under 18 years old and it was impossible for a child to remain at home, for example, because of behavioral problems and an adverse family situation. In this sample, 56 boys (19.6%) and seven girls (2.6%) received treatment in the institution based on a criminal-law measure; the others were treated under a civil-law measure. Treatment was aimed at reducing the juveniles' problematic and delinquent behavior, as well as providing education.

During the juveniles' stay in the institution, treatment files were constructed by a multi-disciplinary team. These files contain, for example, psychological and psychiatric reports, reports from the Dutch Child Protection Board, and treatment evaluations. Information from the treatment files shows that the juveniles in the sample are characterized by a vulnerable background. For example, these youths often grew up in adverse family situations; 37.8 percent of the boys and 65.5 percent of the girls came from families where there were problems with regard to alcohol abuse, substance abuse, criminal family members, or unemployment in the family. The level of education in our sample is low. Almost one-third of the boys and one-quarter of the girls were in a low level of education before entering the institution, which means they attended special education or elementary school only. The others usually attained some vocational training or secondary education. In addition, a large part of the sampled juveniles

1 For this research, formal consent has been obtained from the Dutch ministry of Security and Justice.

displayed problematic behavior such as aggression (65% of the juveniles) and problems with authority (over 50% of the juveniles). Moreover, although the majority of the sample was treated in the institution based on a civil-law measure, the larger part of the sample had had contact with the juvenile justice system during adolescence; 80.7 percent of the boys and 55.6 percent of the girls were convicted of a serious offense at least once prior to age 18. Taken together, these youths experience problems in multiple domains and are therefore at risk of experiencing difficulties when they enter the labor market.

After they had been discharged, we observed the boys and girls from ages 18 to 32. Eleven men and nine women died during the follow-up period, and two men and four women emigrated. For these respondents, the follow-up period was shorter than 15 years.

For more information on the sample, see Van der Geest et al. (2009) and Verbruggen, Blokland, and Van der Geest (2012).

#### 4.5.2 *Employment*

The dependent variable in this study is a dichotomous variable, indicating whether someone is employed for at least one day in a given age year. This variable thus represents the chance that someone obtains employment. This variable is defined this way because based on the theoretical framework outlined above, it is assumed that a history of unemployment and/or criminal behavior influences chances of being hired, not necessarily the duration of a job. Therefore, in the analyses, we focus on whether a person obtained employment for at least one day per year, rather than looking at the number of days employed per year. Also, the average number of days employed among labor market participants in our sample is relatively high across the observed years, indicating that our minimum measure can be interpreted as meaningful participation. Other studies looking at employment probability used similar measures, for example, by looking at whether respondents were employed or not when interviewed, whether they were employed for at least one week a year, or whether they received any legal income in a given period (e.g., Apel & Sweeten, 2010; Lanctôt et al., 2007; Pettit & Lyons, 2009).

The employment variable is based on employment data that was collected from Suwinet, the national database of the Ministry of Social Affairs and Employment in the Netherlands. The Suwinet database contains information about official employment at the individual level from 1992 onward. In this database, the start date and end date of a job are registered; however, there is no information about the type of job and whether someone was part-time or full-time employed. As the database became fully computerized from 1998 onward, employment participation rates before that time may underestimate actual employment levels; however, this underestimation is non-systematic. Additional to Suwinet, the trade register ('KvK Bedrijvenregister') managed by the Netherlands Chamber of Commerce was accessed. This trade register contains historical information about business ownership. The period someone had a business of their own was coded as being employed.

### 4.5.3 Unemployment

To examine the effects of unemployment on employment probability (at time  $t$ ), lagged variables for unemployment measures were constructed. First, a variable that represents whether a respondent has made the transition to the labor market was constructed. This variable is coded with value 1 if someone was not active on the labor market yet, and 0 if he or she was. This variable will not be interpreted, but is included in the models to account for the possibility that at the start of the observation period, respondents can be unemployed because they engage in other activities such as schooling before they enter the labor market.<sup>2</sup> Second, a dichotomous variable was created indicating whether someone was unemployed at  $t-1$ . This variable starts at the year of the first job, while the years when someone was not yet active on the labor market are coded as missing. When someone was incarcerated for the entire year, the unemployment variable is coded as missing. Third, a measure for unemployment duration was constructed, indicating how many years someone was unemployed up to  $t-2$ . This variable starts counting when respondents become unemployed after their first job. The unemployment duration variable mounts up with every additional year of unemployment, but resets to zero when someone is employed again. Finally, a variable that represents the number of unemployment spells up to  $t-1$  was constructed, a spell of unemployment being one or more years of unemployment between years in which one was employed for at least one day (see Table 4.1).

**Table 4.1** Coding of the unemployment variables

	S	E	U	U	I/U	E	U	U
Not yet on the labor market	1	0	0	0	0	0	0	0
Unemployed	-	0	1	1	-	0	1	1
Number of years unemployed	0	0	1	2	3	0	1	2
Number of unemployment spells	0	0	1	1	1	0	2	2

S = in school; E = employed; U = unemployed; I/U = incarcerated and unemployed.

### 4.5.4 Conviction

Information on convictions is retrieved from the judicial documentation abstracts of the Netherlands Ministry of Security and Justice. These abstracts (comparable with US 'rap sheets') contain information on all offenses that are registered at the public prosecutor's office, as well as information on whether the case resulted in a conviction. For this study, the information on the type of offense and the date of the conviction is used. Offenses are classified according

<sup>2</sup> This has the effect that our analyses pertain only to those that actually entered the labor market (i.e., were employed for at least one day) during the follow-up of the study. This pertains to over 80 percent of the sample.

to the standard classification for offenses in the Netherlands (Statistics Netherlands, 2000). We focus on convictions for serious offenses, which means that minor offenses such as vandalism and road traffic offenses are excluded from the analyses. Serious offending consists of violent offenses, property offenses, serious public offenses, drugs offenses, and weapon-related offenses (Loeber, Farrington & Waschbusch, 1998).

The lagged variables for convictions include a variable for the number of convictions at  $t-1$ , as well as a variable pertaining to the sum of the number of convictions up to two years ago ( $t-2$ ).

#### 4.5.5 *Incarceration*

Information on incarceration was acquired differently for men and women, as a result of different types of permission to access data sources in different phases of the data collection. For the men, information on incarceration was retrieved from the Judicial Penitentiary files of the Ministry of Security and Justice. These files contain information on a person's incarceration history, including dates of entry and release. When the penitentiary file could not be accessed, incarceration information was complemented with information on imposed unconditional prison sentences as registered on the judicial documentation abstracts.

For the women, information on incarceration was obtained via the department of the Ministry of Security and Justice ('Dienst Justitiële Inrichtingen') that manages the Dutch prison registration system ('TULP'). This system contains information on dates of entry and release from all penitentiaries in the Netherlands. Although different data sources were used to gather information on incarceration for men and women, both sources provide accurate information about when a person was incarcerated.

Similar as to how the unemployment variables were coded, lagged variables for incarceration were created. The lagged variables pertaining to incarceration include a dichotomous variable whether someone was incarcerated the previous year, a measure for the number of years a person is incarcerated at  $t-2$  that resets to zero when someone is released, and a variable that represents the number of incarceration spells.

#### 4.5.6 *Analytical strategy*

Unobserved heterogeneity may obscure the effects of unemployment, conviction, and incarceration on employment chances. To control for the possible biasing effects of stable unobserved characteristics, fixed effects models are estimated. Fixed effects models are very useful when controlling for heterogeneity, because these models only examine within-individual change and control for all stable individual characteristics, observed or unobserved, so long as those characteristics do not change over time (Allison, 2005). Since the dependent variable is a dichotomous measure of whether one is employed or not in a given age year, logit fixed effects models are estimated.



Five fixed effects models are estimated separately for men and women. The first model estimates the effects of the unemployment variables on the likelihood of employment in the subsequent year. In Model 2a, we examine the effects of convictions on the likelihood of being employed the next year, while Model 2b estimates the effects of the incarceration variables in addition to the effects of convictions. Finally, Models 3a and 3b focus on the effects of convictions and incarceration, over and above the effects of prior unemployment, on the likelihood of employment in the following year.<sup>3</sup>

These five models are first estimated on the total dataset. Then, the models are estimated again, but only for the years in which individuals are unemployed. By doing so, we specifically estimate the effects of unemployment history, conviction, and incarceration on the chance of being hired (instead of being hired or staying unemployed as in the previous models).

## 4.6 RESULTS

### 4.6.1 Descriptives

#### **Employment and unemployment**

From ages 18 to 32, 231 men (85.6%) and 226 women (83.7%) find a job at least on one occasion, meaning that 15 percent of the sample is chronically unemployed during the entire observation period. Despite that the majority finds employment at least once, their employment careers are unstable and interspersed by spells of unemployment. Within the ever-employed group, men on average have 8.6 job contracts (SD 7.1), while women on average have 8.2 jobs (SD 8.1) (Table 4.2).

Figures 4.1 and 4.2 show the percentage of men and women unemployed by age, as well as, among those ever employed, the average number of (new) jobs per age. Figure 4.1 shows that the number of unemployed men decreases by age. At age 18, at the beginning of the observation, the vast majority of men are unemployed, while at the end of the observation period, around 40 percent of men are unemployed. Furthermore, from the start of the observation period, the average number of jobs in a given year of age increases to an average of 2.5 jobs per year until the age of 25 and decreases thereafter. What stands out is that, with age, more men become employed, and as they do so, their employment career becomes more stable.

For women, Figure 4.2 shows a similar downward trend in the percentage of women who were unemployed in a given year of age, as well as a decrease in the average number of jobs among women who were employed in a given year. At age 18, 70 percent of the women are unemployed, while at the end of

3 Although correlations ranged between .17 and .76, this did not cause multicollinearity. Regressing the likelihood of employment on the lagged predictor variables (temporarily ignoring the nested character of the data), almost all Variance Inflation Factors remained below 2.5 (on average VIF=2.01). The largest VIF value is for unemployment at t-1 (VIF=2.74).



the observation period, 55 percent of the women are unemployed. This means that in any given year of the observation period, the majority of women is unemployed. In addition, in the group of women who do work at some point during the observation period, the average number of jobs per age year starts around 2.5 jobs and decreases with age. Thus, as is the case for men, for women, unemployment rates decline gradually, and the employment careers of women who do work become more stable with age.<sup>4</sup>

**Table 4.2 Descriptive statistics**

	Men (N=270)		Women (N=270)	
	N	%	N	%
<b><i>(Un)employment history</i></b>				
Ever employed	231	85.6	226	83.7
<i>Within the employed group</i>				
Average number of jobs	8.6 (SD 7.1)		8.2 (SD 8.1)	
Average duration of job (in months)	9.03 (SD 19.73)		5.68 (SD 12.97)	
Average number of years unemployed t-2†	0.12 (SD 0.33)		0.25 (SD 0.43)	
Average number of unemployment spells t-1†	0.05 (SD 0.22)		0.08 (SD 0.27)	
<b><i>Criminal history</i></b>				
Ever convicted	216	80.0	129	47.8
Ever incarcerated	154	57.0	49	18.1
<i>Within the convicted group</i>				
Average number of convictions	12.5 (SD 14.7)		4.3 (SD 4.8)	
Average time incarcerated (in months)	14.8 (SD 22.0)		3.3 (SD 7.8)	
Average number of years incarcerated t-2†	0.23 (SD 0.42)		0.08 (SD 0.27)	
Average number of incarceration spells t-1†	0.08 (SD 0.28)		0.04 (SD 0.20)	

Note: † Based on the number of person-years (NT). Average number of years unemployed t-2: NTmales = 2691, NTfemales = 2294. Average number of unemployment spells t-1: NTmales = 2922, NTfemales = 2520. Average number of years incarcerated t-2: NTmales = 2598, NTfemales = 1340. Average number of incarceration spells t-1: NTmales = 2814, NTfemales = 1466.

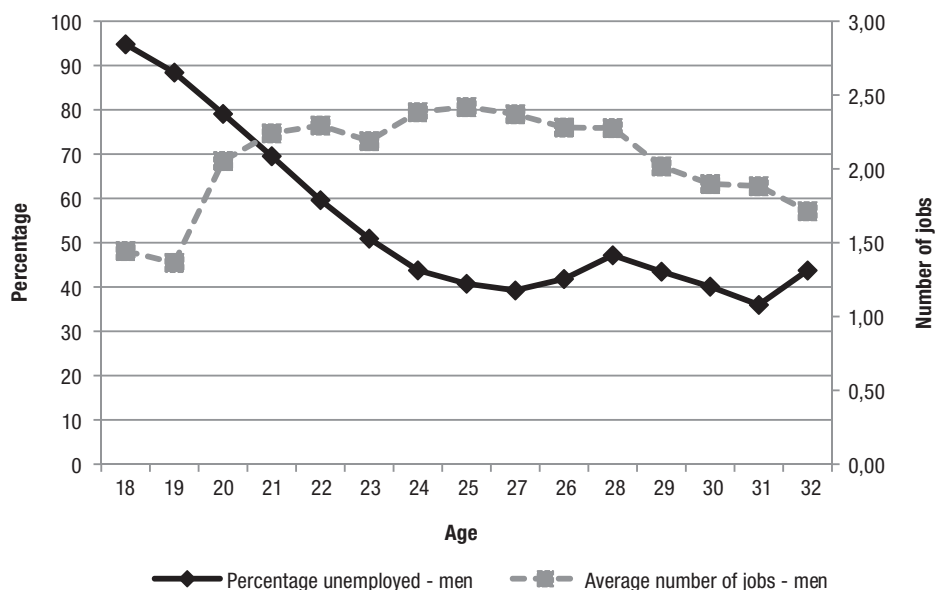
4 In our sample, at the end of the observation period, 60 percent of the men were currently employed, versus 45 percent of the women. Compared to the general Dutch population, employment participation in our sample is considerably lower. In the past decade, employment participation for Dutch men in the age group 25-35 was almost 90 percent, and for women, it was around 75 percent. When compared to low educated people in the Netherlands, differences in employment participation for men are still quite large; employment participation for low educated Dutch men is around 80 percent in the age group 25-35. However, for women, the difference is small; employment participation is around 50 percent for low educated women, compared to 45 percent in our sample (Statistics Netherlands, 2012).

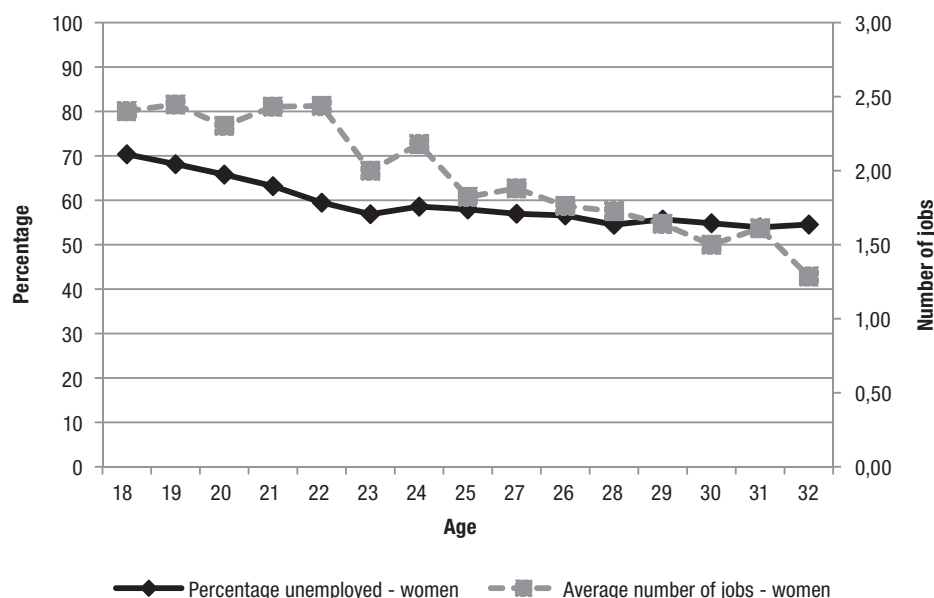
### Conviction and incarceration

Between ages 18 and 32, 80 percent of all men and almost 50 percent of all women are convicted for a serious offense at least once (Table 4.2). Within the group of offenders, men, on average, are convicted almost three times more often than women; the average number of convictions for men being 12.5 (SD 14.7) and for women 4.3 (SD 4.8).

In addition, 216 men (57.0%) and 49 women (18.1%) of the total sample are incarcerated at least once during the observation period. Within the group of convicted respondents, men on average are incarcerated for 14.8 months (SD 22.0), while for women, the average number of months incarcerated is much lower (3.3 months, SD 7.8).

**Figure 4.1** Average number of jobs and percentage unemployed per age year for men



**Figure 4.2** Average number of jobs and percentage unemployed per age year for women

#### 4.6.2 Effects of unemployment, conviction, and incarceration on the probability of employment

To examine the effects of unemployment, conviction, and incarceration on employment probability, five fixed effects models are estimated separately for men and women (Tables 4.3 and 4.4 respectively). In the first model, the effects of a history of unemployment on employment probability are estimated. For men, the first model shows that all unemployment measures are associated with a lower probability of being employed in the subsequent year. Being unemployed in the previous year ( $t-1$ ), the duration of that unemployment spell, and the accumulated number of prior unemployment spells all have a significant negative effect on the likelihood of being employed.<sup>5</sup>

Models 2a and 2b examine the effects of a criminal history on the likelihood of being employed. Model 2a shows that the number of convictions in the previous year and the total number of prior convictions up to  $t-2$  decrease the probability of being employed. The three incarceration variables, being incarcerated in the previous year, the duration (in years) of that incarceration spell, and the number of prior incarceration spells, have no significant effect on employment chances (Model 2b).

<sup>5</sup> For both unemployment and incarceration, we also estimated separate models for duration and the number of spells. These models yielded substantially similar results to the models reported here. Results from these models are available from the author.

When in Model 3a both the effects of unemployment and the effects of convictions are estimated, results show that the effect of convictions is non-significant, while unemployment is significantly associated with a decrease in the likelihood of being employed. Adding the incarceration variables to the model gives similar results; a history of unemployment is associated with a reduced likelihood of being employed, while a criminal history has no significant effect on employment probability (Model 3b).

The results thus indicate that when unemployment measures are taken into account, a criminal history has no additional negative effect on employment probability for men. This suggests that for men, a criminal label does not hurt employment prospects, over and above the detrimental effects of a history of unemployment.

**Table 4.3** Effects of unemployment history and criminal history on employment probability for men

	Model 1	Model 2a	Model 2b	Model 3a	Model 3b
	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)
Age	2.31 (.33)***	2.37 (.17)***	2.33 (.19)***	2.32 (.34)***	2.31 (.35)***
<b>Unemployment history</b>					
Not yet on the labor market t-1	-1.57 (.19)***			-1.56 (.19)***	-1.56 (.19)***
Unemployed t-1	-1.39 (.23)***			-1.37 (.23)***	-1.36 (.23)***
Number of years unemployed t-2	-.18 (.08)*			-.18 (.08)*	-.18 (.08)*
Number of unemployment spells t-1	-1.12 (.23)***			-1.11 (.23)***	-1.14 (.23)***
<b>Criminal history</b>					
Number of convictions t-1		-.11 (.03)**	-.11 (.04)**	-.05 (.04)	-.07 (.04)
Number of convictions up to t-2		-.04 (.01)***	-.06 (.01)***	-.003 (.01)	-.02 (.02)
Incarcerated t-1			-.22 (.18)		.11 (.20)
Number of years incarcerated t-2			.06 (.06)		.07 (.07)
Number of incarceration spells t-1			.19 (.17)		.21 (.19)

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . Age/10.  $N = 207$ . The number of respondents is smaller than the total number of men in the sample ( $N = 270$ ), because respondents that do not experience change over time in time-varying variables are excluded from fixed effects models.

For women, both unemployment in the previous year and the number of prior unemployment spells decrease the likelihood of being employed in the subsequent year, while the number of years unemployed at t-2 has no significant effect (Model 1). In addition, in Model 2a, the number of convictions in the previous year as well as the number of prior convictions at t-2 have a negative effect on the employment probability in the subsequent year. Similar to our findings for men, a history of incarceration exerts no (additional) significant effect on the likelihood of employment (Model 2b).

In the combined models, both unemployment in the previous year and the number of prior unemployment spells, as well as the number of convictions in the previous year, have a significant negative effect on the likelihood of being employed (although the coefficients for convictions are smaller than in Models 2a and 2b). The duration of unemployment is not significant, nor is the total number of convictions (Models 3a and 3b). Again, incarceration has no significant effect on the likelihood of being employed (Table 4.4).

Unlike for men, when unemployment history is taken into account, convictions still considerably impact on the likelihood of employment for women. This suggests that over and above the detrimental effects of a history of unemployment, women's employment chances are also affected by a criminal labeling.

**Table 4.4** Effects of unemployment history and criminal history on employment probability for women

	Model 1	Model 2a	Model 2b	Model 3a	Model 3b
	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)
Age	1.44 (.35)***	.88 (.18)***	.86 (.18)***	1.46 (.35)***	1.44 (.35)***
<b>Unemployment history</b>					
Not yet on the labor market t-1	-1.15 (.21)***			-1.15 (.21)***	-1.15 (.21)***
Unemployed t-1	-1.39 (.19)***			-1.36 (.19)***	-1.36 (.19)***
Number of years unemployed t-2	-.11 (.06)			-.10 (.07)	-.10 (.07)
Number of unemployment spells t-1	-.56 (.20)**			-.58 (.20)**	-.58 (.20)**
<b>Criminal history</b>					
Number of convictions t-1		-.51 (.16)**	-.51 (.17)**	-.39 (.17)*	-.39 (.17)*
Number of convictions up to t-2		-.18 (.07)*	-.19 (.08)*	-.06 (.08)	-.08 (.09)
Incarcerated t-1			-.64 (.64)		-.24 (.68)
Number of years incarcerated t-2			-.38 (.36)		-.37 (.40)
Number of incarceration spells t-1			.50 (.45)		.50 (.51)

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . Age/10. N=179. The number of respondents is smaller than the total number of women in the sample (N=270), because respondents that do not experience change over time in time-varying variables are excluded from fixed effects models.

#### 4.6.3 Effects of unemployment, conviction, and incarceration on the probability of employment when unemployed the previous year

Next, the effects of unemployment history and criminal history on employment probability (in the subsequent year) are estimated only for those years in which individuals were registered as being unemployed. Thus, for those unemployed, the model estimates the likelihood of finding a job in the subsequent year (Tables 4.5 and 4.6). The models show similar results for both men and women. All models show that for those unemployed, a history of unemployment has significant negative effects on the likelihood of being hired in the subsequent

year. Especially the negative effect of the number of prior unemployment spells is large, for both men and women. A conviction record or a history of incarceration does not impact on the chance of being hired. Somewhat unexpected is that for men in Model 3b, the number of prior incarceration spells increases the probability of employment. Perhaps this effect can be explained by participation in job training or reintegration projects.

**Table 4.5** Effects of unemployment history and criminal history on employment probability when unemployed the previous year for men

	Model 1	Model 2a	Model 2b	Model 3a	Model 3b
	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)
Age	11.18 (.90)***	1.35 (.29)***	1.34 (.32)***	10.89 (.91)***	10.81 (.92)***
<b>Unemployment history</b>					
Not yet on the labor market t-1	1.02 (.60)			.99 (.61)	.96 (.61)
Number of years unemployed t-2	-.84 (.12)***			-.83 (.13)***	-.85 (.13)***
Number of unemployment spells t-1	-5.02 (.60)***			-5.05 (.60)***	-5.18 (.62)***
<b>Criminal history</b>					
Number of convictions t-1		-.04 (.05)	-.05 (.05)	-.04 (.06)	-.06 (.06)
Number of convictions up to t-2		.01 (.02)	-.004 (.02)	-.03 (.03)	.01 (.03)
Incarcerated t-1			.07 (.27)		-.20 (.33)
Number of years incarcerated t-2			.08 (.09)		.07 (.11)
Number of incarceration spells t-1			.15 (.26)		.65 (.33)*

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . Age/10. N=197; NT=1197.

## 4.7 DISCUSSION

In this study, we examined the effects of conviction, incarceration, and a history of unemployment on the probability of being employed, following a sample of disadvantaged youths with limited labor market prospects well into adulthood. Respondents (270 men and 270 women) were observed from ages 18 to 32, using officially registered longitudinal data on convictions, incarceration, and (un) employment.

Results show that 15 percent of the sample is chronically unemployed between ages 18 and 32 and that the employment careers of respondents who are employed during the observation period are interspersed with spells of unemployment. In addition, the majority of the sample is convicted of a serious offense at least once during the observation period (80% of the men and almost 50% of the women). Moreover, more than half of the men and almost one-fifth of the women are incarcerated at some point between ages 18 and 32.

**Table 4.6** Effects of unemployment history and criminal history on employment probability when unemployed the previous year for women

	Model 1	Model 2a	Model 2b	Model 3a	Model 3b
	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)
Age	10.74 (1.08)***	.78 (.28)**	.79 (.28)**	10.75 (1.09)***	10.84 (1.11)***
<b>Unemployment history</b>					
Not yet on the labor market t-1	1.57 (.53)**			1.51 (.53)**	1.58 (.54)**
Number of years unemployed t-2	-.68 (.12)***			-.70 (.13)***	-.70 (.13)***
Number of unemployment spells t-1	-4.99 (.58)***			-5.01 (.58)***	-5.04 (.59)***
<b>Criminal history</b>					
Number of convictions t-1		-.30 (.20)	-.28 (.20)	-.22 (.23)	-.25 (.24)
Number of convictions up to t-2		-.15 (.09)	-.10 (.12)	.05 (.09)	.13 (.15)
Incarcerated t-1			.16 (.78)		.75 (.99)
Number of years incarcerated t-2			-.14 (.37)		-.48 (.54)
Number of incarceration spells t-1			-.30 (.64)		-.20 (.91)

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . Age/10. N=155; NT=985.

Fixed effects models were used to estimate the effects of unemployment, conviction, and incarceration on the likelihood of employment while controlling for possible selection effects. Results show that for men, when unemployment history is taken into account, a criminal background does not further damage their employment chances. Significant negative effects of unemployment in the previous year and the number of unemployment spells are found, which indicates that the first hypothesis, stating that a history of unemployment is a negative signal and therefore decreases employment chances, can be confirmed. Furthermore, a longer duration of unemployment is associated with lower employment probability, which suggests a stronger negative signal or, alternatively, a process of human capital depreciation during spells of unemployment. However, when unemployment history is taken into account, no support was found for the hypothesis regarding the detrimental effects of a criminal label due to conviction or incarceration on employment probability. In addition, we find no evidence for human capital deterioration during incarceration, since the duration of incarceration exerted no significant effect on the likelihood of employment.

Surprisingly, we find no significant effect of a criminal background on employment probability once an individual's unemployment history is taken into account. This finding is in contrast with studies that found negative effects of a criminal history on labor market outcomes (e.g., Apel & Sweeten, 2010; Nagin & Waldfogel, 1995) and studies that demonstrated that employers are more willing to hire a welfare recipient – or someone who has been temporarily unemployed –



rather than an ex-offender (Holzer, Raphael & Stoll, 2004; Raphael, 2010). We see several possible explanations for these divergent findings.

First, the men in our sample are low educated and are likely to only apply for low-skilled jobs in industries such as construction and manufacturing. In these types of industries, a criminal record might not necessarily be a bad signal (Holzer et al., 2003). Second, it is possible that we find less detrimental effects of criminal history in our study, as background screening in the Netherlands is regulated by the government, while in the US, employers can also turn to private companies for criminal history information. As a result, Dutch ex-offenders are better able to conceal their criminal record from employers and prevent stigmatization. Third, due to the less punitive penal climate, prison sentences in the Netherlands are relatively short in comparison to the US. A spell of incarceration might therefore have less impact on an offender's human capital and thus have less consequences for employment outcomes in the Netherlands than in the US. Finally, the effects of prison time on job reentry might be differential, as for some, job opportunities may have deteriorated, whereas for others, job training and reintegration may have improved their job opportunities (Kling, 2006). Although in contrast with most US studies, the findings from this study are in line with another Dutch study by Ramakers et al. (2012) that showed, using a quasi-experimental design, that ex-prisoners are more likely to find employment, and also more quickly, than non-imprisoned but unemployed males (who are to experience an incarceration spell in the future).

For women, both being unemployed the previous year and the number of prior unemployment spells decrease the likelihood of being employed the subsequent year, whereas unemployment duration has no significant effect on employment chances. These results suggest that the process of signaling, rather than human capital deterioration, is at play. Besides the detrimental effects of an unemployment history, a criminal record has an additional negative effect on employment chances for women. Convictions in the previous year lower employment chances in the subsequent year. The hypothesis that stated that a criminal label decreases employment chances can therefore be confirmed, at least with regard to conviction. Similar to our findings for men, we found no additional effects of incarceration on employment probability.

Thus, next to the negative effects of unemployment, criminal labeling also seems to impact women's employment chances. This indicates that women are more affected by a criminal label, possibly because women's criminal behavior is even less accepted than that of their male counterparts. This finding is also in line with prior research that suggests that women apply for jobs that concern contact with, for example, children or customers, and for these types of jobs, the negative characteristics associated with a criminal label can be a reason not to hire a woman with a criminal record (Holzer et al., 2003).

However, for those without a job, fixed effects models show that a criminal history does not decrease the likelihood of finding a job in the subsequent year. Only indicators of prolonged unemployment or past job instability – such as the duration of unemployment and the number of unemployment spells – exert a considerable negative influence on an individual's future employment

probability. Our results thus indicate that for this high-risk sample of men and women with poor prospects in the labor market from the outset, the signal of prior unemployment and the lack of human capital preclude them from being hired, while their criminal background does not further damage their already limited employment prospects.

#### 4.7.1 *Limitations and directions for future research*

Although this study gains valuable insights in the employment prospects of both men and women characterized by a disadvantaged background, this study – like any – has its limitations. For example, our data contain no information on the reasons why people experience difficulties in finding a job, or their motivation and efforts in finding a job. Following labeling theory, employers may view ex-offenders as less suitable candidates for a job, and this may subsequently affect the individual's self-concept or perceived likelihood of reentering the labor market. A similar process is mentioned in the unemployment literature. When applying for jobs repeatedly results in rejection, people become discouraged, and as a result, their job-seeking behavior declines. As a way of coping with the stress of being (long-term) unemployed (McKee-Ryan, Song, Wanberg & Kinicki, 2005; Paul & Moser, 2009), people may over time adapt to the state of unemployment. They adopt an alternative identity – that of an 'unemployed' person – and increasingly withdraw themselves from the formal labor market (De Witte, 1993; McFadyen, 1995).

This means that instead of experiencing difficulties with finding a job, the men and women in our sample might not even be looking for formal work anymore. For example, Apel and Sweeten (2010) showed that for ex-inmates, non-employment indicated being *out of the labor force* – which means they did not have a job but also that they were not looking for work. Rather than treating unemployment as an undesirable condition that has the same meaning for all individuals, they found that some have no interest in being employed. Unfortunately, in our data it is impossible to make this distinction empirically. However, using fixed effects models, we excluded all individuals who remained in the same condition across the entire observation (employment or unemployment). Thus, the results from this study do not pertain to those individuals who were chronically unemployed and never had interest in being employed. Future research using self-report data is necessary to shed light on the extent to which men and women with disadvantaged backgrounds tend to withdraw themselves from the formal labor market completely.

Furthermore, information on the extent to which sample members attained some form of education after their stay in the juvenile justice institution is unavailable for the entire sample under study. This is unfortunate, since education is likely to affect employment probability. However, it might be that in a high-risk sample such as the one under study, education may not play such an important role, as a recently conducted follow-up study with part of the current sample showed that the extent to which men and women attained additional education in young adulthood is limited (Van der Geest, Bijleveld & Verbruggen, 2013).

Although in our high-risk sample a criminal history was not found to affect the probability of finding work, it may still affect the probability of finding good-quality, well-paying work (Davies & Tanner, 2003). As for this study, we had no information about the quality of work or occupational status; this possibility awaits future research.

Moreover, especially in a high-risk sample, informal or illegal ways to make money might be an attractive alternative for working low-quality and low-paying jobs (Fagan & Freeman, 1999; Freeman, 1991). Engaging in these ways to provide for oneself can further increase the distance to conventional employment opportunities. However, using only official information on employment, we were unable to examine to what extent individuals in our study ended up working in the informal economy.

Finally, to examine the mechanisms selecting into formal or informal employment, future research should also include self-report or qualitative information. Theory suggests that a good, stable job is crucial for desistance from crime (Sampson & Laub, 1993). Therefore, a better understanding of the kind of support needed to promote successful transition into the labor market is of great importance. If with the right support early unemployment among vulnerable youths can be prevented, this will improve their long-term employment prospects and the chance that these youths end up living conventional adult lives.

## ADULT LIFE ADJUSTMENT OF PREVIOUSLY INSTITUTIONALIZED YOUTHS. THE RELATIONSHIP BETWEEN CRIMINAL HISTORY, EMPLOYMENT HISTORY, AND ADULT LIFE OUTCOMES

### Abstract

*This article examines adult outcomes of previously institutionalized youths. The sample consists of 251 boys and girls who, in the 1990s, were treated for serious problem behavior in a Dutch juvenile justice institution. Information on personal and childhood characteristics was extracted from the treatment files that were compiled during their stay in the institution. In addition, conviction data was used to determine subjects' criminal careers from age 12 up to the year 2011. Conducting face-to-face interviews with these former juvenile justice institution detainees between 2010 and 2012 when they were on average 34 years old, we collected retrospective information on employment history (using a life history calendar) and several important current life-course outcomes, such as housing, employment, intimate relationships, parenthood, and health. This enabled us to examine the effects of adolescents' personal and background characteristics as well as their criminal and employment careers on current adult life adjustment. Results showed that these formerly institutionalized youths experience difficulties adjusting to conventional adult life. Moreover, while personal and childhood characteristics exert no significant influence on adult outcomes, criminal behavior in young adulthood is associated with a significantly lower level of later adult life adjustment, and employment in young adulthood is related to higher levels of adjustment in later adult life domains.*

### 5.1 INTRODUCTION

In the Netherlands, over 4,000 youths are institutionalized in juvenile justice or youth care institutions every year because there are serious concerns about their behavior and development (Jeugdzorg Nederland, 2011; 2013; CBS Statline, 2013). These youths are generally characterized by troubled backgrounds: coming from adverse family situations, having experienced victimization, showing academic failure, or suffering from psychological problems, and many exhibit serious behavioral problems and delinquency. As these youths

transition to adulthood, they tend to face additional problems, for which they have fewer resources to cope with, and therefore may experience difficulties adapting to conventional adult social roles (Osgood et al., 2005). Their vulnerable background and problematic behavior also places them at risk of developing a persistent pattern of criminal behavior in adulthood (e.g., Moffitt & Caspi, 2001), which further reduces their long-term life chances.

As of yet, we know very little about the adult outcomes of formerly institutionalized youths. Retrospectively, adult offenders, especially those with a long history of offending, often report adverse conditions during their youth, but prospective knowledge about the extent to which vulnerable youths succeed in making a successful transition to adulthood and end up leading conventional lives is scarce. How are these youths progressing in conventional life domains such as employment, intimate relationships, parenthood, and health? To what extent does their vulnerable background reduce their life chances? To what extent does a history of criminal involvement affect their adjustment in adult life? And to what extent does employment – the life domain most targeted by interventions – contribute to adult life success? Finding answers to these questions is important, not only for detecting undesirable life careers and marginalization but also for preventing major hidden societal costs like those resulting from these youths' criminal behavior, unemployment, welfare dependency, and health-care expenditures (Caspi & Moffitt, 1995; Piquero, Jennings & Farrington, 2013). Therefore, the current study examines predictors of adult life adjustment of vulnerable youths in the Netherlands, by studying a sample of 251 formerly institutionalized adults, using both officially registered longitudinal data and self-reported data collected in face-to-face interviews.

## 5.2 THEORY

According to life-course theories, the transitional phase between adolescence and adulthood plays an important role in determining an individual's opportunities and life chances. While with age most youths start to take up adult social roles such as work, marriage, and parenthood, the conditions affecting the extent to which youths benefit from these life-course transitions may differ greatly between individuals. Especially vulnerable youths, who are characterized by troubled backgrounds, behavioral problems, and delinquency, may have limited resources to exploit the opportunities presented to them to strengthen their social position and raise their life chances. Due to childhood risk factors and early institutionalization, they may also face structural and social disadvantage, cutting off opportunities to increase their human capital and causing difficulties in achieving long-term life success (Osgood et al., 2005; Uggen & Wakefield, 2005).

Some theorists suggest that missing out on the opportunities to adjust to adult roles is due to the same underlying predisposition that caused their problem behavior in early life in the first place. In this respect, Gottfredson and Hirschi (1990) argue that low self-control, which is assumed to remain relatively stable

after childhood, causes (continued involvement in) criminal behavior and is expected to have long-term negative consequences in other life domains as well, such as unemployment and substance abuse. Life-course theories, however, suggest that childhood risk factors alone cannot predict the long-term differences in life success, related to school, employment, and crime. Instead they emphasize that social bonds, opportunities, and social stigma, due to past criminal involvement, play an important role in explaining differences in life chances (e.g., Sampson & Laub, 1993).

One of the key transitions in early adulthood and a possible marker of future life success is employment. Work not only generates income and therefore contributes to financial independence (Arnett, 2000), it also provides structure to everyday life, generates feelings of usefulness and purpose, and is a source of social contacts and status (Hulin, 2002; Jahoda, 1982). Because of this, employment is of great importance for one's identity, well-being, and psychological health (Paul & Batinic, 2010). Especially for institutionalized youth, employment can be crucial to help build a conventional identity, to foster transitions to other adult roles, and to adopt a non-criminal lifestyle (Chung, Little & Steinberg, 2005). However, at-risk youths can find that, due to their past criminal involvement, opportunities to connect to conventional domains may be diminished or even blocked. When in reaction to experiencing blocked opportunities, these youths again turn to crime and deviance, they are in danger of becoming trapped in a downward spiral of cumulative disadvantage and may find that conventional opportunities that can help them live successful lives are getting more and more out of reach (Sampson & Laub, 1997). Whereas previously institutionalized youths who continue to engage in criminal behavior are at risk of increasing marginalization, those who do manage to find employment may break out of the vicious circle and start increasing their chances to become established in adult life domains.

### 5.3 ADULT OUTCOMES OF VULNERABLE YOUTHS

Longitudinal studies following high-risk or criminal youths well into adulthood are scarce. The few existing studies that do have a long enough follow-up usually focus solely on outcomes in terms of (young) adult criminal behavior (e.g., Piquero, Brame, Mazerolle & Haapanen, 2002; Wartna, Kalidien, Tollenaar & Essers, 2006), and to date, little research attention is devoted to outcomes in other adult life domains. As a result, not much is known about long-term adult outcomes of at-risk youths in important conventional life domains, such as the labor market, family life, and health.

One of the first large-scale longitudinal studies to consider multiple life domains was the 'Unraveling Juvenile Delinquency' study by Glueck and Glueck (1950; 1968), in which they followed 500 delinquent boys selected from correctional schools and a matched group of 500 non-delinquent boys selected from public schools. At the first wave of data collection when the boys were 14 years old on average, information was collected on a wide array of domains such as



the boys' social and psychological characteristics, information on family background, school, work, and criminal behavior. When these boys were aged 25 and 32, two additional waves of data collection were carried out, in which the Gluecks gathered information on living arrangements, marriage, parenthood, employment, and adult criminal behavior. The dataset used for the 'Unraveling Juvenile Delinquency' study was later updated and reanalyzed by Sampson and Laub (1993; Laub & Sampson, 2003). Although their key interest was explaining criminal desistance patterns, they also studied adult outcomes for the delinquent and non-delinquent boys and found continuity in troublesome behavior into young and middle adulthood. Juvenile delinquency was not only related to later criminal behavior but also to negative outcomes in other life domains, such as employment and family life. For example, Sampson and Laub found that delinquent boys were more likely than their non-delinquent counterparts to experience job instability, as well as being economically dependent up to age 32. In addition, delinquents were more likely to get divorced or separated and to have weak attachment to their spouses (Sampson & Laub, 1993).

Using data from the Cambridge Study in Delinquent Development, a longitudinal study in which 411 boys from South London were followed from age eight to adulthood, Farrington et al. (2006) studied adult life adjustment at age 48 for persistent offenders, desisters, late-onset offenders, and never-convicted men, the latter being the largest group. Using self-report information collected at ages 32 and 48, the researchers determined to what extent these men were living 'successful lives', defined by doing well in six out of nine important life domains, including employment, intimate relationships, and mental health. At age 32, almost 80 percent of the men lived successful lives, and at age 48, this percentage had increased to almost 90 percent. However, when analyzing life success among active offenders, the study shows that at age 32, only 42 percent of all persistent offenders lived successful lives, compared to 90 percent of those who were not convicted. At age 48, despite an overall increase in life success, the percentage of persisters living a successful life was still the lowest by far (Farrington et al., 2006).

Also using the Cambridge data, Piquero et al. (2010) used developmental trajectories of criminal convictions up to age 40, in addition to childhood risk factors, to predict 'life failure' (the opposite of the above-mentioned measure of 'life success') at age 48. This study showed that, even when controlling for early risk factors, the two groups with the highest offending rate through age 40 – the very-low-rate chronic offenders and the high-rate chronic offenders – experienced significantly more life failure at age 48 (Piquero et al., 2010).

Although the Unraveling Juvenile Delinquency study and the Cambridge study include a wealth of information and cover a long follow-up period, both studies are limited because their samples comprise only males. A study by Rutter, Quinton, and Hill (1990) examined adult outcomes for both men and women. They followed a sample of youths who were institutionalized in group homes because their parents were unable to take care of them and a control group of youths who were not institutionalized. They demonstrated that, compared to the controls, formerly institutionalized men and women showed worse outcomes



with regard to psychosocial functioning, a measure that included living conditions, work, marriage, psychopathology, and crime. Nilsson and Estrada (2009) conducted a longitudinal study in which they followed a Swedish birth cohort – comprising both males and females – to age 48. They employed a similar classification as Farrington et al. (2006) by distinguishing between persisters, desisters, late-onset offenders, and unconvicted men and women, and studied adult life-course conditions, such as employment and family formation, for these four groups. Results showed that life turned out well for the majority of those ever registered for crime. The adult outcomes of desisters were comparable to the outcomes of those never convicted. However, men and women who were registered for crime both as youths and as adults (the persisters) showed the poorest outcomes at age 48. For example, employment participation among those who were convicted was lower compared to those never convicted, and the proportion receiving welfare or disability pensions was considerably higher among persisters than among those never convicted. Furthermore, a large proportion of the male and female persisters was living alone at age 48, as opposed to cohabitating or being married. Finally, the Nilsson and Estrada study showed that women with a history of convictions showed poorer adult outcomes than convicted men.

#### 5.4 THE CURRENT STUDY

The current study focuses on childhood risk factors and employment and criminal careers as they relate to long-term life chances. As outlined above, only a small number of studies have examined adult outcomes of at-risk youths. These studies show that, in general, people with a history of serious behavioral problems, delinquency, or institutionalization in adolescence are more likely to experience difficulties in conventional adult life domains. This is especially so for those with a more extensive criminal history (e.g., Farrington et al., 2006). However, some important features of the currently available studies potentially limit the generalizability of these conclusions. First, with the exception of the Swedish study by Nilsson and Estrada (2009), these studies were carried out in Anglo-Saxon countries that are characterized by a sociocultural context that differs in important ways from that of other Western European nations. Second, the adolescents followed in these studies came of age in vastly different historical contexts. National and temporal differences in, for example, the penal climate, the welfare system, and public health care, may impact the way in which adolescent behavioral problems relate to adult life success. Finally, prior research predominantly studied male samples and as a result had to remain silent on the risk factors for adult life failure in vulnerable women. Taken together, still little is known about the extent to which vulnerable boys and girls in countries with comparatively strong social safety nets, such as the Netherlands, are able to establish themselves as adults in contemporary society.

Therefore, using data from a contemporary Dutch sample, the current study will test whether we can prospectively identify those youths most at risk of

failing to become healthy, self-sufficient, productive members of society. In addition, we focus on the role of employment in promoting adult life adjustment, since employment is not only one of the most important adult roles, it is also the life domain that is most easily targeted by interventions. This study builds upon prior research on the adult outcomes of at-risk groups by studying a sample of formerly institutionalized Dutch men and women (N=251) addressing the following research questions: First, what is the level of adjustment in conventional adult life domains of men and women formerly institutionalized in a juvenile justice facility? Second, to what extent do personal and childhood characteristics of formerly institutionalized men and women predict their level of adult life adjustment? Third, to what extent does criminal behavior of formerly institutionalized men and women, over and above personal and childhood characteristics, predict their level of adult life adjustment? And fourth and finally, to what extent does employment history of formerly institutionalized men and women predict their level of adult life adjustment, when personal and childhood characteristics and criminal history are taken into account? Answers to these questions can shed light on the degree to which adult life adjustment is explained by stable individual characteristics, as stated by static or trait theories (e.g., Gottfredson & Hirschi, 1990), or whether events in young adulthood, namely, criminal behavior and employment, influence adult outcomes as well, as is assumed by those taking a life-course approach (e.g., Sampson & Laub, 1993).

## 5.5 METHOD

### 5.5.1 *Sample*

This study uses data from the NSCR 17Up study, a longitudinal study following high-risk youths well into adulthood.<sup>1</sup> The original sample of the 17Up study comprises of 270 boys and 270 girls who were institutionalized in a Dutch judicial treatment institution for juveniles in the 1980-90s. The boys were discharged from the institution between 1989 and 1996, the girls between 1990 and 1999. At that time, juveniles could be referred to the judicial treatment institution based on a criminal-law measure or a civil-law measure. A criminal-law measure could be imposed when a juvenile had committed an offense and was aged between 12 and 18. A civil-law measure could be imposed when a child was under age 18 and it was impossible for a child to remain at home, for example, because of behavioral problems or an adverse family situation. All boys and girls in the sample showed serious behavioral problems, often including delinquency. During their stay, all respondents received treatment, which

---

1 For this study, formal consent was obtained from the Dutch Ministry of Security and Justice. In addition, the Ethics Committee of the Faculty of Law (CERCO) of VU University approved the study and its procedures.

aimed at reducing the juveniles' problematic and delinquent behavior, as well as providing them education.

Between July 2010 and January 2012, a follow-up study was carried out which aimed at conducting face-to-face interviews with as many of the original 540 formally institutionalized youths as possible. At the start of the follow-up study, 22 subjects (4.1%) of the original 540 boys and girls had died. This observed death rate is relatively high, given that subjects are still in their thirties (CBS Statline, 2013). In addition, 14 subjects had emigrated, and five subjects were living in institutions, such as a psychiatric institution or a forensic clinic, that refused to cooperate with the study. This left 499 men and women that could be approached for an interview. These subjects first received a letter containing information about the study, after which trained interviewers approached them at home or, in some cases, in the prison or in the treatment center for psychiatric or addiction problems where they resided. Homeless subjects were approached through shelters and municipal welfare departments.

If respondents were willing to take part in the study, the actual interviews were conducted using a laptop, either at the respondent's home or at another place (e.g., a nearby cafe) if the respondent so desired. Interviews lasted 1,5 hours on average and respondents received a gift voucher of € 25 at the completion of the interview.

All in all, 251 respondents (118 men, 133 women) participated in the study, which comes down to a 50.3 percent response rate. Of those not participating, 156 individuals refused, 83 could not be contacted after six to eight attempts, four individuals were reached but were too ill to participate (due to severe psychiatric problems such as psychosis), and five individuals did not turn up (repeatedly) for their interview appointment. A response analysis was conducted, to compare those who participated in the study with those who could not be approached or refused to participate. Groups were compared on a number of personal and background characteristics, living situation, employment, marital status, and criminal behavior. Besides those without an officially registered home address being under-represented in the subsample, responders and non-responders did not differ significantly on these characteristics (Van der Geest, Bijleveld & Verbruggen, 2013). We therefore consider the subsample under study representative of the original sample.

On average, respondents were interviewed 17 years after they had left the institution (17.7 years,  $SD = 2.8$ ). For men the follow-up period is 19.4 years ( $SD = 2.3$ ), for women 16.3 years ( $SD = 2.3$ ). The average age of the respondents at the time of the interview was 36.8 for men ( $SD = 2.4$ ) and 32.9 for women ( $SD = 2.5$ ).

### 5.5.2 *Measures*

#### **Personal and childhood characteristics**

Personal and childhood characteristics were extracted from treatment files that were constructed by a multi-disciplinary team during the juveniles' stay in the treatment institution. These files contain, for example, psychological and psychiatric reports; outcomes of standardized and validated instruments, such as

the Wechsler Intelligence Scale for Children-Revised and the Child Behavior Checklist; reports from the Dutch Child Protection Board; and treatment evaluations. Based on the rich information on respondents' personal and childhood characteristics present in the treatment files, for this study we included the following variables in the analyses: adverse family situation (i.e., a sum of whether respondents grew up in a family where there was alcohol abuse, substance abuse, a parent with psychopathology, family members with a criminal history, or unemployment), victimization (i.e., a sum of whether respondents experienced neglect, physical abuse, and sexual abuse), psychological problems (yes/no), aggression (yes/no), and impulsiveness (yes/no). Furthermore, since education is a possible protective factor important for positive adult outcomes (e.g., Bernburg & Krohn, 2003; Tanner, Davies & O'Grady, 1999), information on education was collected in the interviews using a questionnaire, which included questions about whether respondents followed and finished an education while institutionalized or after they had left the institution.

### **Criminal history**

Respondents' criminal history is reconstructed using officially registered information on convictions. Information on convictions was collected from judicial documentation abstracts of the Netherlands Ministry of Security and Justice. These abstracts contain information on every case that is registered at the public prosecutor's office. Information about the type of offense and offense date is available. Because the offense date was not registered before 1995, missing offense dates were imputed with estimates based on the date of the conviction. For this article, we focus on convictions for serious offenses. Offenses are classified according to the standard classification for offenses in the Netherlands (Statistics Netherlands, 2000). Serious offending consists of violent offenses, property offenses, serious public offenses, drug offenses, and weapon-related offenses (Loeber, Farrington & Waschbusch, 1998). Minor offenses such as vandalism and road traffic offenses are excluded from the analyses. Using data on convictions, a dichotomous variable was constructed indicating whether a person was convicted for a serious offense between ages 12 and 17. Furthermore, based on conviction data from age 18 to the year prior to the interview, we calculated the average number of convictions in adulthood per year ( $\lambda$ ).

### **Employment history**

Information about employment history was collected during the interviews using a life history calendar. This is a structured instrument for gathering more reliable retrospective information about the occurrence and timing of important life events over the life course. The calendar provides the respondent with visual cues which stimulate cross-domain referencing, thereby facilitating respondents' accurate recall of the timing and duration of events and transitions in different life-course domains (Freedman, Thornton, Camburn, Alwin & Young-DeMarco, 1988). Using the life history calendar, respondents indicated for each age year whether they were employed or not. Using information on respondents' self-reported formal employment (temporary work, regular work,

or business ownership) in the years from age 18 to one year prior to the interview, an average measure of employment was constructed, with a higher value indicating that a respondent was employed for a larger part of the observation period.

### Adult life adjustment

The dependent variable in this study is respondents' level of adult life adjustment in the year they were interviewed. In the interviews, questions were asked following semi-structured and structured questionnaires to collect information about several adult life domains. Based on this information, the following variables were constructed: (1) *Regular accommodation*. Subjects were considered to have regular accommodation when they lived in a house at the time of the interview, as opposed to living in an institution or detention center, staying at relatives or friends, or being homeless. (2) *Employment*. This variable measures whether respondents were formally employed (i.e., employment for which taxes are paid) at the time of the interview. (3) *Intimate relationship*. This variable measures whether subjects were in a romantic relationship at the time of the interview. (4) *Regular contact with children*. Subjects were asked whether they had children, and, if so, how often they had contact with their child(ren). Respondents who had daily or weekly contact with their child(ren) were coded as having regular contact with their children, as opposed to respondents who had less frequent or no contact with their child(ren). (5) *Satisfactory health*. Using questions derived from the Dutch Health Monitor (GGD, 2005), respondents were asked whether they had taken medication prescribed by a doctor during the past 12 months and whether they had had contact with one of the following seven health care professionals/facilities: medical specialist, company doctor, mental health service, psychologist, psychiatrist, addiction care service, or an emergency room. Based on these eight indications of health problems, respondents were considered to be in satisfactory health when they had a score of 0 or 1, and coded as having no satisfactory health situation when they scored 2 or higher. (6) *Alcohol abuse*. Items derived from the Composite International Diagnostic Interview (CIDI) were used to ask subjects whether they had used alcohol in the past 12 months and whether they had experienced difficulties on conventional life domains as a consequence of their alcohol use. Following the criteria for alcohol abuse of the DSM-IV-TR, it was determined whether subjects met the criteria for alcohol abuse.<sup>2</sup> (7) *Drug abuse*. Similar as with alcohol abuse, items derived from the CIDI were used to ask subjects whether they had used drugs (soft and hard drugs) in the past 12 months, and whether their drug use interfered with activities in conventional life domains. Following the criteria of the DSM-IV-TR, it was determined whether subjects could be classified

2 One meets the criteria for alcohol abuse when he or she shows a maladaptive pattern of drinking, manifested by, for example, recurrent alcohol-related legal problems, or recurrent use of alcohol, resulting in a failure to fulfill major role obligations at work, school, or home (American Psychiatric Association, 2000:214).

as having a substance abuse problem.<sup>3</sup> (8) *Self-reported crime*. Using items from the International Self-Report Delinquency (ISRD) scale, respondents reported whether they had committed one or more offenses (i.e., vandalism, theft, burglary, fraud, threat/assault, violent offense, sex offense, and drug dealing) in the past 12 months.

All variables were coded dichotomous, with a value of 1 indicating 'adjusted' and 0 'not adjusted'. Alcohol abuse, drug abuse, and self-reported crime are taken as indicators of unsuccessful adjustment; therefore, these variables were coded as 0 when subjects were classified as having an alcohol abuse problem or a drug abuse problem or had committed an offense. For each subject the average level of *adult life adjustment* across all eight domains was calculated, with a higher value indicating a higher level of adult life adjustment. Respondents that did not have children were coded as missing on that particular life domain, as not having children does not necessarily mean being 'not adjusted'. In those cases, the average value of adult life adjustment was calculated based on the values of the seven remaining life domains. Cronbach's alpha of this scale is 0.62, which is comparable to the measure used by Farrington et al. (2006) and Piquero et al. (2010).

It must be noted that it is difficult to construct a measure of adult life adjustment that adequately captures the true level of life success (e.g., Crosnoe & Elder, 2002; Pulkkinen, Nygren & Kokko, 2002). The measure of adult life adjustment used in this study is based on whether individuals adopted adult roles that are thought to be markers of conventional adult life, such as employment and being in a relationship. When subjects have not attained these adult markers, they are considered to be 'unadjusted'. However, for those people, 'failure' in a certain life domain does not necessarily mean that they are not doing well. For example, an unemployed person might be satisfied with being a homemaker, and someone might be content being single instead of in a relationship. Given that we could not take these subjective perceptions of one's status in adult life domains into account, our measure of adult life adjustment – like that used in prior studies – can be considered 'conservative' in the political rather than the statistical sense of that term.

### 5.5.3 Analyses

Descriptive statistics for respondents' personal and childhood characteristics, criminal history, employment history, and different dimensions and level of adult life adjustment are presented for males and females separately. Next, to examine to what extent personal and childhood characteristics, criminal behavior, and employment history influence adult life adjustment, three (hierarchical) multiple regression models are estimated. The first model estimates the effects

3 One meets the criteria for substance abuse when he or she shows a maladaptive pattern of substance use, manifested by, for example, recurrent substance-related legal problems, or recurrent substance use, resulting in a failure to fulfill major role obligations at work, school, or home (American Psychiatric Association, 2000:199).



of subjects' personal and childhood characteristics on adult life adjustment. The second model examines to what extent criminal history is related to adult life adjustment, over and above the effects of subjects' background factors, while the third model estimates the extent to which employment history impacts adult life outcomes, over and above personal and childhood characteristics and criminal history.

## 5.6 RESULTS

### 5.6.1 *Descriptive results*

#### **Personal and childhood characteristics**

As mentioned above, the boys and girls placed in juvenile justice institutions often display behavioral problems and are characterized by vulnerable family backgrounds. Behavioral problems and background characteristics giving rise to placement in the institution are described in detail in the treatment files and are summarized in Table 5.1. A large proportion of men (74.2%) and women (84.6%) were highly impulsive, and two thirds of the men and women displayed aggressive behavior. In addition, the intelligence of around one third of the respondents was below average.

Furthermore, around two thirds of the boys (66.9%) and girls (61.7%) experienced psychological problems. The prevalence of psychological problems is considerably higher in our sample than what is average in the Dutch population (Verhulst, Van der Ende, Ferdinand & Kasius, 1997). The most common diagnoses for boys were conduct disorder (22.9%), depression (22.9%), and ADHD (11.0%). Girls were most often diagnosed with depression (42.1%). In addition, a sizable share of these girls also displayed externalizing problem behavior, such as serious behavioral problems (20.3%) or conduct disorder (14.3%).

In addition, respondents – and in particular the girls – grew up in adverse family environments. For example, more girls than boys had at least one parent with mild or severe psychopathology, and girls more often than boys grew up in a family where alcohol abuse, substance abuse, criminal family members, or long-term unemployment were present.

Moreover, a large part of the sample, almost 85 percent, experienced at least one form of victimization before they entered the institution. The most common was neglect, which was more often experienced by boys (80.5%) than by girls (66.2%). Furthermore, over half of the women were victims of physical abuse, and one third of the women were victims of sexual abuse, while fewer men were physically (30.5%) or sexually abused (6.8%).

Finally, data from the interviews show that the majority of boys and girls followed vocational training during their stay at the institution. When they left the institution, 67 boys (57.8%) had a diploma, compared to only 11 girls (8.3%), possibly because females were somewhat younger when they were discharged from the institution. Over 70 percent of men and women report that they



attended some form of education after their stay in the institution, and more than half of the respondents also received a diploma (Table 5.1).

**Table 5.1 Descriptive statistics for personal and childhood characteristics and education**

	Men (N=118)		Women (N=133)	
	N	%	N	%
Low intelligence	29	30.5	45	34.9
Aggression	77	65.8	90	67.7
Impulsiveness	72	74.2	77	84.6
Psychological problems	73	61.9	82	61.7
Problematic family environment	45	38.1	80	60.2
Alcohol abuse in the family	27	22.9	44	33.1
Substance abuse in the family	8	6.8	19	14.3
Psychopathology parent	33	28.0	62	46.6
Criminal family members	19	16.1	38	28.6
Unemployment in the family	16	15.7	27	20.3
Victimization	100	84.7	112	84.2
Neglect	95	80.5	88	66.2
Physical abuse	36	30.5	68	51.1
Sexual abuse	8	6.8	44	33.1
Finished an education during stay in the institution	67	57.8	11	8.3
Finished an education after stay in the institution	58	51.3	67	52.3

### **Criminal history**

The majority of boys (89.0%) and girls (97.7%) received treatment in the institution under a civil-law measure; the others, 13 boys and three girls, were institutionalized based on a criminal-law measure. Boys stayed in the institution for an average of 21 months (SD = 14 months) and were discharged at an average age of 17.3 (SD = 1.4). The girls' stay in the institution was shorter, 13 months (SD = 8 months) on average, and girls left the institution at a younger age than boys (age 16.6, SD = 1.3) (Table 5.2).

Prior to age 18, the majority of boys (81.4%) were convicted of at least one serious offense. Within the convicted group, boys averaged almost six convictions for serious offenses (SD = 5.21). More than half of the girls (52.6%) were convicted of a serious offense before age 18. Within the group of female offenders, girls were convicted of a serious offense 2.4 times on average (SD = 2.5).

From age 18 onward, over 80 percent of the men and almost 50 percent of the women were convicted for a serious offense. Male offenders were convicted 13.5 times on average (SD = 16.3), while female offenders were convicted 4.2 times (SD = 5.1). Adjusting for the length of the follow up, this boils down to an average rate of 0.72 (SD = 0.85) convictions per year for the criminally

active men in the sample, compared to an average rate of 0.28 (SD = 0.33) for the criminally active women. Men were thus convicted both more often and more frequently than women (Table 5.2).

### Employment history

The majority of men (89.7%) and women (84.0%) were employed at least once after the age of 18. However, among those ever employed, men on average were employed for two thirds of the observation period ( $M = 0.66$ ,  $SD = 0.34$ ), while women were employed little over half of the follow-up period ( $M = 0.58$ ,  $SD = 0.32$ ) (Table 5.2).

**Table 5.2** Descriptive statistics for criminal history and employment history

	Men (N=118)		Women (N=133)	
	N	%	N	%
Institutionalized based on civil-law measure	105	89.0	130	97.7
Length of stay in institution (in months)	M=21.4	SD=13.5	M=13.3	SD=8.3
Age left institution	M=17.3	SD=1.4	M=16.6	SD=1.3
Convicted for a serious offense < age 18	96	81.4	70	52.6
Average number of convictions for serious offenses < age 18	M=5.69	SD=5.21	M=2.39	SD=2.47
Convicted for a serious offense > age 18	97	82.2	63	47.4
Average number of convictions for serious offenses > age 18	M=13.48	SD=16.27	M=4.19	SD=5.11
Convictions in adulthood (lambda)	M=0.72	SD=0.85	M=0.28	SD=0.33
Employed in adulthood	104	89.7	110	84.0
Employment in adulthood (yearly)	M=0.66	SD=0.34	M=0.58	SD=0.32

### Adult life adjustment

Descriptives for the different dimensions of adult life adjustment are presented in Table 5.3. These dimensions were measured at the time of the interview, when the male respondents were on average 36.8 years old ( $SD = 2.4$ ) and the females 32.9 years old ( $SD = 2.5$ ).

(1) *Regular accommodation*. At the time of the interview, 216 respondents (86.1%) had a satisfactory housing situation, which means living in a regular house, as opposed to being homeless, staying with relatives or friends, or living in an institution or detention center. Seven percent of the sample ( $N=18$ , 7.2%) was incarcerated or institutionalized at the time of the interview, which is relatively high compared to the institutionalization rate in the general Dutch population (CBS Statline, 2013; Van Rosmalen, Kalidien & De Heer-De Lange, 2012). Of those institutionalized, seven men and one woman were imprisoned, four men and two women were treated in a forensic clinic, and three men and one woman were institutionalized in a psychiatric institution. Another seven percent (6.8%)

of the respondents in our study was either homeless or lived in with family or friends.

(2) *Employment.* 105 subjects (41.8%) had a regular job at the time of the interview, which means that while being in their thirties, over half of the sample is unemployed. Employment participation in our sample is considerably lower than in the general Dutch population (CBS Statline, 2013). To illustrate, in 2011 employment participation in the Netherlands for men aged 25 to 35 was 86 percent, and 90 percent for men aged 35 to 45. That same year employment participation for Dutch women was 78 percent for those aged 25 to 35, and 74 percent for those aged 35 to 45. In our sample, 46.6 percent of the men (N=55) are employed, of whom 45 are employed full time. Most of the employed men work in construction and manufacturing (25.9%), transport and logistics (20.7%), and IT/electronics (10.3%). Others work, for example in the food service industry, or in health and social care. Of the women, 37.6 percent (N=50) are employed, and 24.1 percent are employed full time. Women mainly work in health and social care (31.4%), food service industry (9.8%), cleaning (7.8%), beauty salons (5.9%), or other sectors such as retail and sales and administrative work. Most jobs held by our sample members can be classified as low-skilled jobs.

(3) *Intimate relationship.* At the moment of the interview, almost two thirds of the respondents (62.9%) were in a romantic relationship. Of those in a relationship, 102 respondents (41.1%) cohabit while not being married, and a small proportion of the respondents is married (11.7%). Although it is difficult to determine how the number of subjects who are in a relationship relates to the figure in the Dutch population, the percentage of subjects in our sample cohabiting or being married appears to be lower (Latten, 2004).

(4) *Regular contact with children.* Almost three out of five men (55.9%) and almost four out of five women (78.8%) had one or more children. The average age at birth of the first child is lower than in the general population, especially for women (Van der Geest et al., 2013). Among those who had children, 75.4 percent of all fathers and 89.2 percent of all mothers reported that they have regular contact with their child(ren). In the total sample, over half of the respondents (54.6%) are classified as having children with whom they have regular (daily or weekly) contact. When asked about the reason for not having regular contact with their children, parents in our sample report conflicts with their ex-partner about custody or that children were placed under care of the Child Protection Board.

(5) *Satisfactory health.* Less than half of the men and women (48.7%) are considered to be in satisfactory health, meaning that they have not had, or only once have had, contact with a health-care professional or took medication prescribed by a doctor in the 12 months preceding the interview. Almost half of the respondents had contact with a medical specialist (N=105, 47.3%) and one third of the respondents (N=73, 33.2%) had contact with one or more mental health-care professionals (mental health service provider, a psychologist, or a psychiatrist) in the past year. Furthermore, 95 respondents (41.7%) report that they took prescription medication in the past 12 months. In comparison, in 2010, 32.9% of Dutch citizens between ages 30 and 40 had contact with a medical

specialist (CBS Statline, 2013). In the general population, 6.2 percent of those aged between 18 and 64 had contact with a mental health-care professional in the past 12 months (De Graaf, Ten Have & Van Dorsselaer, 2010). Finally, of all Dutch people between ages 20 and 45, 26.8 percent take medication prescribed by a doctor (CBS Statline, 2013). Both physical and mental health problems thus appear to be more common among formerly institutionalized men and women as compared to the Dutch population as a whole.

(6) *Alcohol abuse*. In our sample, 45 percent of the men meet the criteria for alcohol abuse in the 12 months prior to the interview, compared to 22 percent of the women. This is considerably higher than in the general Dutch population, where among men aged 25 to 34 8.7 percent and among men aged 35 to 44 5.6 percent meet the criteria for alcohol abuse in the past year. Among Dutch women aged 25 to 34 and women aged 35 to 44, percentages are even lower, respectively, 2.6 and 1.2 percent (De Graaf et al., 2010).

(7) *Drug abuse*. While over half of the respondents (56.1%) report that they did not use any drugs in the past 12 months, over a quarter of the sample (27.9%, 40 men, 30 women) reports daily or weekly drug use. Over one third of the men (37.6%) meet the criteria for drug abuse in the 12 months prior to the interview, compared to one in five women (21.3%). Similar as with alcohol abuse, the figures reported by our sample are substantially higher than those among similarly aged men and women in the general Dutch population. Among Dutch men aged 25 to 34, 2.0 percent is considered to have a drug abuse problem, while this is 1.4 percent among men aged 35 to 44. Among women, 1.0 percent of Dutch women aged 25 to 34 and 0.3 percent of Dutch women aged 35 to 44 meet the criteria for drug abuse (De Graaf et al., 2010).

(8) *Self-reported crime*. The majority of respondents report that they did not engage in criminal behavior in the past 12 months. Among men and women who report that they did commit one or more offenses in the past 12 months (61 respondents, 29.5%), the offenses that are most reported are threatening/assault (N=36), drug dealing (N=20) and theft (N=18). Self-reported criminal behavior in this sample appears to be higher than among Dutch men and women. To illustrate, a study by Donker (2004) found that among young adults aged 18 to 32 (average age of 24.5), nearly one in four respondents reported to have engaged in criminal behavior over the past year. Wittebrood, Michon, and ter Voert (1997) showed that in a sample of men and women aged 15 and older (with an average age of 37), less than one in five of the respondents reported committing a crime in the previous year. These studies combined suggest that for the Dutch general population, the prevalence of self-reported crime in (young) adulthood is somewhere between 17-24%. Given that the prevalence of offending declines with age, population estimates based on more age-homogeneous samples are expected to be even lower.

Taken together, formerly institutionalized men and women experience considerable difficulties in multiple adult life domains. Not surprisingly, the average level of adult life adjustment can be considered to be quite low (Table 5.3).

Moreover, men have a significantly lower average level of adult life adjustment ( $M = 0.61$ ,  $SD = 0.28$ ) than women ( $M = 0.69$ ,  $SD = 0.22$ ) ( $t(224.98) = -2.82$ ,  $p < 0.01$ ).

**Table 5.3** Descriptive statistics for adult life adjustment

	Men (N=118)		Women (N=133)	
	N	%	N	%
(1) Regular accommodation	95	80.5	121	91.0
Incarcerated or institutionalized	14	11.9	4	3.0
Homeless	2	1.7	0	0.0
Other (e.g., staying at family/friends)	7	5.9	8	6.0
(2) Employed	55	46.6	50	37.6
Full-time employed	45	38.1	32	24.1
(3) In a relationship	68	58.6	88	66.7
Cohabiting	45	38.8	57	43.2
Married	17	14.7	12	9.1
(4) Regular contact with child(ren)	46	39.0	91	68.4
Child(ren)	66	55.9	104	78.8
(5) Satisfactory health	54	50.0	60	47.6
(6) Alcohol abuse	48	45.7	27	22.3
(7) Drug abuse	38	37.6	26	21.3
(8) Self-reported crime	34	34.0	27	25.2
Average adult life adjustment	M=0.61	SD=0.28	M=0.69	SD=0.22

#### 5.6.2 *The relationship between personal and childhood characteristics, criminal history, employment history, and adult life adjustment*

To examine to what extent subjects' gender, personal and childhood characteristics, criminal behavior, and employment history influence outcomes in adulthood, three (hierarchical) multiple regression models are estimated (Table 5.4). The first model, which includes subjects' gender, personal and childhood characteristics, and education contribute, shows that these variables accounted for a significant amount of the variability in adult life adjustment ( $R^2 = .12$ ,  $F(9, 200) = 2.93$ ,  $p < 0.01$ ). Gender has a significant effect on adult life adjustment, indicating that over a decade after leaving the institution, girls are doing better in conventional adult life domains than their male counterparts. Furthermore, subjects that did not finish an education after their stay in the institution have lower levels of adult life adjustment. The other personal and childhood risk factors have no significant effect on the level of adult life success.

In Model 2, we examined to what extent criminal history influences adult life adjustment while controlling for gender, personal and childhood characteristics, and education. In the second model, adding the variables for criminal

history significantly improved prediction of adult life adjustment, over and above the personal and childhood characteristics ( $R^2$  change = .06,  $F(2, 198) = 7.22$ ,  $p < 0.01$ ). While being convicted for a serious offense between ages 12 and 17 has no significant effect on the level of adult life adjustment, convictions in adulthood do significantly predict poorer adult outcomes. Gender no longer predicts adult life adjustment when criminal history indicators are added to the model, but not finishing an education remains predictive of having more negative life outcomes in adulthood.

The third model shows that when employment history is also taken into account, prediction of adult life adjustment is again significantly improved ( $R^2$  change = .04,  $F(1, 197) = 10.11$ ,  $p < 0.01$ ). Individuals who are employed for a larger part of the observation period show a higher level of adult life adjustment, while a higher average number of convictions in adulthood is associated with a significant lower level of adult life adjustment. The effect of education on adult outcomes is no longer significant in Model 3 suggesting that much of the effect of education on adult life adjustment materializes through having more stable employment careers. Still, the percentage explained variance in Model 3 is still quite low ( $R^2 = .22$ ), indicating that adult life adjustment is only for a small part explained by personal and childhood characteristics, criminal history, and employment history.

## 5.7 DISCUSSION

This study examined levels of adult life adjustment at an average age of 34 of formerly institutionalized men and women ( $N=251$ ) who were treated for serious problem behavior in a Dutch juvenile justice institution in the 1990s. Data on personal and childhood characteristics, officially registered data on criminal convictions, retrospective self-report data on employment history (collected using a life history calendar), and several important adult life domains enabled us to study the effects of a vulnerable background, criminal history, and employment history on adult life adjustment.

Results showed that the backgrounds of formerly institutionalized youths are characterized by serious problem behavior, psychological problems, victimization, an adverse family situation, and academic failure. In young adulthood, over 80 percent of the men and almost 50 percent of the women were convicted of a serious offense. Although the majority of men and women find a job at some point during the observation period, their work histories are unstable and they are employed for only little over half of the observation period on average.

Moreover, this study showed that a large part of the men and women experienced difficulties in conventional life domains when they are well into their thirties. Compared to the general Dutch population, they fare worse on all measured life domains: a higher number of sample members institutionalized or incarcerated, lower employment participation, less family formation, a higher rate of contact with (physical and mental) health-care professionals, more alcohol and drug abuse, and more (self-reported) criminal behavior. All in

all, the average level of overall adult life adjustment is considered to be low in this sample. Furthermore, outcomes for previously institutionalized men are significantly worse than for women.

**Table 5.4** The relationship between personal and childhood characteristics, criminal history, employment history, and adult life adjustment

	Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE
Intercept	.68***	.05	.73***	.06	.62***	.07
Gender	.16***	.04	.09†	.05	.10*	.05
Low intelligence	-.001	.04	.01	.04	.02	.03
Aggression	-.006	.04	-.01	.04	-.01	.04
Impulsiveness	-.001	.04	.01	.03	.01	.03
Psychological problems	-.01	.04	-.004	.04	-.01	.04
Problems in the family	-.02	.02	-.02	.02	-.02	.02
Victimization	-.003	.02	.01	.02	.003	.02
No diploma during institutionalization	-.05	.04	-.03	.04	-.001	.04
No diploma after institutionalization	-.09**	.03	-.07*	.03	-.05	.03
Convicted < age 18			-.05	.04	-.06	.04
Convictions in adulthood			-.09**	.03	-.07*	.03
Employment in adulthood					.15**	.05
R <sup>2</sup>	.12		.18		.22	

†  $p < 0.10$ , \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

Hierarchical regression models were used to examine the relationship between personal and childhood characteristics, criminal history, employment history, and adult life adjustment. The models showed that most of the individual and childhood characteristics, except for academic failure, are not significantly related to adult life adjustment. Criminal behavior does impact adult life outcomes, as a higher average number of convictions in adulthood is associated with more difficulties in conventional adult life domains. Employment, on the other hand, is associated with better adult outcomes, as those who are employed for a larger part of the observation period show a higher level of adult life adjustment. Although the variance explained by the models is quite low, adult life adjustment appears to be mainly explained by events during adulthood and not so much by childhood risk factors. This suggests that it is difficult to identify those youths who are most at risk of failing to adopt adult roles based on childhood characteristics, at least within this institutionalized sample. The results therefore do not lend support for the static view that adult life outcomes can be explained by stable individual characteristics (Gottfredson & Hirschi, 1990), but indicate that behavioral patterns in adulthood matter for later life outcomes, thus supporting theories that assume that criminal behavior later in life



can negatively influence adult outcomes and that ties to social institutions such as employment can bring about positive change in the life course (e.g., Sampson & Laub, 1993). For those youths who are able to find employment, work appears to facilitate transitions in other life domains, thereby promoting life success in adulthood.

In the current study, vulnerable girls showed more childhood risk factors than did boys, which is in line with previous research suggesting that delinquent girls are characterized by a more problematic background than are criminal boys (Eme, 1992). However, the adult outcomes of vulnerable women are better than those of their male counterparts. Despite girls having more troubled backgrounds, boys more often grow up to develop a (persistent) criminal career in adulthood, a result also found in the Nilsson and Estrada study (2009). Because of their higher level of criminal behavior, men might be more likely to become trapped in a downward spiral of cumulative disadvantage, making it increasingly difficult to adapt to adult roles (Sampson & Laub, 1997). Since research on the long-term outcomes of vulnerable youths, and particularly females, is scarce, future research is needed to test for the mechanisms underlying these gender differences.

The strengths of this study lie in the contemporary sample of both men and women and the attention paid to non-crime outcomes when subjects are well into their thirties. Some limitations of the study must be noted as well. To begin with, it is important to keep in mind that the sample under study is a very specific at-risk group that exhibited problem behavior deemed so serious that they were institutionalized. Childhood risk factors averaged high in this sample and this may influence the generalizability of our findings. In addition, those that were homeless and could not be traced via shelters in the municipality of last known residence and those that had died after leaving the juvenile justice institution were not included in the analyses. Given that being homeless (and the conditions usually surrounding homelessness) rank near the bottom of our life adjustment scale and that premature death can be viewed as the worst possible adult outcome, our findings on the levels of adult life adjustment in formerly institutionalized youths may to some extent be positively biased.

Furthermore, while our measure of adult life adjustment may be regarded as 'conservative', as no information on subjective appraisals was taken into account, dichotomous indicators of adult outcomes may also overestimate the true level of adult life adjustment. For one, respondents may live in a run-down rental apartment in a notoriously bad neighborhood, work a low-paying dead-end job, and be involved in a conflict ridden relationship and still be considered 'well adjusted'. Second, for many of the indicators used, longitudinal measures of stability are lacking: respondents may (be forced to) move house every six months or engage in numerous short-lived relationships. Whereas the data used in this study enabled us to examine adult outcomes in a certain year, just as in the Nilsson and Estrada study (2009), Farrington et al. (2006) measured life success in the last five years to take possible instability in adult outcomes into account. Finally, the subjective experience of the level of adjustment in different adult life domains might differ between people, as they might have different

expectations of attaining certain adult roles and different definitions of when they consider themselves as doing well in adult life domains. This indicates that it is difficult to compose an 'objective' measure of adult life adjustment (Crosnoe & Elder, 2002; Pulkkinen et al., 2002). Future research therefore might employ relative measures, like those used in health research, asking respondents about their perceived life success relative to the level of success achieved by others whom they perceive as their peers (e.g., McDowell, 2006).

Moreover, for this study, education was treated as an independent variable, and results showed that academic failure is related to poorer adult outcomes. However, academic achievement might be considered an outcome and thus part of the adult life adjustment measure, given that childhood risk factors and delinquency in adolescence can be related to academic failure (e.g., Hinshaw, 1992). Nevertheless, since this study focuses on adult outcomes when previously institutionalized youths are in their thirties, and academic attainment generally takes place earlier in life, we decided to include educational attainment as a predictor of later adult outcomes. Finally, in this study, we relied on officially registered data on criminal convictions to reconstruct respondents' juvenile and adult criminal histories, which means the actual number of offenses committed is likely to be underestimated.

In conclusion, this study showed that a substantial part of formerly institutionalized youths continue to experience difficulties in multiple adult life domains. This indicates that, although the Dutch welfare state is characterized by a strong social safety net, vulnerable youths in the Netherlands are in need of additional support to help them make a successful transition into adulthood. While interventions during institutionalization are the most obvious as they are relatively easy to implement, the current results suggest that vulnerable youths can especially benefit from intensive support after institutionalization, continuing into young adulthood, to help them establish themselves as adults. Interventions aimed at strengthening the position of at-risk juveniles on the labor market, for example, through investment in education and vocational skills, seem especially important. A qualitative study carried out on the same sample of formerly institutionalized adults suggests that after they had been discharged from the institution, these youths hardly received any aftercare. Respondents reported that in their opinion they would have benefitted from education and support to find work and accommodation (Van der Geest et al., 2013). Providing at-risk youths with the right support to improve their adult outcomes is desirable to promote these youths' quality of life, as well as to reduce the high costs they impose on society, in terms of their criminal behavior, unemployment, welfare dependency, and extensive use of health care (Moffitt, 1994; Piquero et al., 2013).

## 6 | GENERAL DISCUSSION

*How did the lives of Ellen, Ray, James, and Regina, described at the beginning of this dissertation, turn out?<sup>1</sup> When Ellen left the institution, she got a job at a large warehouse, where she worked as a cashier. Subsequently she worked as a secretary, but she could not handle the stress at work and ended up at home with a burnout. In addition, she developed a personality disorder and suffered from severe panic attacks. Because of her mental health problems, she is now unable to work and receives disability benefits. Until a year ago, she was in an abusive relationship. One night, she stabbed her boyfriend – in self-defense, according to Ellen. Her children witnessed the incident, and as a result they were taken away by the Child Protection Board. Ellen says she has an alcohol problem; she drinks up to three bottles of wine a day. Over the years, she has been convicted for several violent offenses.*

*Ray left the institution without a high-school degree, and although he held a formal job once, he worked in the informal labor market for most of his adult life. He did go to the job agency several times, but he could not find a regular job because of his lack of work experience. At the moment, he works (informally) as a mechanic in a company owned by his father's friend. His parents give him money, and he earns some extra cash by selling marihuana and by swindling people by pretending to sell mobile phones on the Internet. He has never had his own place to live in; he stays with his parents or with friends. He is addicted to smoking marihuana.*

*James joined the army not long after leaving the institution. He then pursued a technical course in the army but had to leave after an incident for which he had to appear before the military court. After leaving the army, he wanted to stay on the right track, so he took on every job that he could get. He also had his own company for a while, but this company went bankrupt. He now works as a welder for a large cable company, and he is very satisfied with his job. He lives with his girlfriend in a quiet town. His girlfriend is pregnant, and he is optimistic about the future.*

*Soon after Regina left the institution, she met a man who owned a brothel. Because she had nowhere else to go, she moved in with him. She had trouble finding a job because she did not finish high school; she thus started working in the brothel. She attempted to leave the business several times but failed because she had no money and no place to go. After working as a prostitute for four years, she finally broke up with her boyfriend and*

---

1 The stories described in this chapter are derived from face-to-face interviews that the author conducted with respondents from the 17Up study. All identifying information has been changed for reasons of confidentiality.

*left. She found a job in a supermarket and enrolled herself in a course. Subsequently, she worked as a nail stylist and hairdresser for some years and recently opened her own beauty salon. Even though she has to work over 60 hours a week, she is really proud of what she has achieved.*

## 6.1 INTRODUCTION

This dissertation examined the role of employment and crime in the adult lives of previously institutionalized youths, such as Ellen, Ray, James, and Regina. In the Netherlands, over 4,000 youths are institutionalized in juvenile justice or youth care institutions every year. Currently, however, it is largely unclear as to how these youths' lives develop after leaving an institution. Previously institutionalized youths are characterized by a vulnerable background which places them at risk of both continued involvement in criminal behavior and experiencing difficulties adapting to adult social roles. These youths especially face challenges in making a successful transition to one of the most important adult life domains: employment. This is unfortunate, as employment might foster the adoption of a conventional lifestyle and thereby prevent them from developing a persistent criminal career.

As of yet, it is unknown to what extent previously institutionalized youths are able to make a successful transition into adulthood and what role employment and criminal behavior play in their lives. Therefore, this dissertation aimed at examining how previously institutionalized youths fared on the road to adulthood, with a special focus on their experiences in the labor market. The goal of this dissertation was to provide insight into the role of employment and crime in the (adult) lives of these vulnerable youths. Therefore, studying a sample of previously institutionalized men and women, this dissertation aimed to examine (1) the effect of employment on offending, (2) the effects of conviction and incarceration on employment chances, and (3) the extent to which employment and crime influence adult life adjustment. These three main aims are addressed in the four empirical chapters of this dissertation.

In order to examine the complex relationship between the employment career and criminal career of vulnerable youths and to study to what extent they become established as adults, data from the 17Up study was used. The sample of the 17Up study consists of boys and girls (N=540) who were institutionalized in a Dutch juvenile justice institution in the 1990s when they were 15 years old on average. Individual level, officially registered data on convictions and incarceration as well as employment and income support were collected up to age 32. Register data have the advantage that they are very accurate for the entire observation period, as opposed to when respondents have to report retrospectively about the occurrence and timing of events. For example, the data provide precise information about when an individual committed a crime for which he or she was convicted and day-to-day accounts of whether someone was officially employed. The officially registered data was complemented with self-report data collected in face-to-face interviews when subjects were on average almost

35 years old. This self-report data on a variety of adult life outcomes provide insight into adult outcomes in life domains that are not well documented in official databases, such as health, alcohol use, and substance use. Furthermore, rich information on background characteristics retrieved from treatment files that were constructed during the juveniles' stay in the institution was available.

This study thus used a unique and detailed dataset. By combining different types of detailed information (namely, officially registered data, self-report data, and dossier information) and by using advanced analysis techniques (namely, random effects and fixed effects models), this study was able to examine the longitudinal association between employment and crime while taking possible selection effects in the work-crime relationship into account. Moreover, compared to most previous longitudinal research, this study covers a relatively long observation period of 15 years. Following high-risk youth well into adulthood is crucial when studying transitions into adult roles such as employment and its relation to criminal career development.

By studying this sample of previously institutionalized youths, this dissertation aimed to contribute to the existing body of research by testing a number of theories addressing the work-crime relationship using longitudinal data for both men and women in the Dutch context. However, the specific nature of this sample entails that caution is warranted while generalizing the results from this dissertation to other groups.

This chapter is organized as follows. First, following the three main aims of this dissertation, the results of the empirical chapters are summarized and the theoretical implications of the findings are discussed. Then, the implications of the findings of this study for policy and practice are discussed. The chapter closes with directions for future research.

## 6.2 MAIN FINDINGS AND THEORETICAL IMPLICATIONS

### 6.2.1 *The problematic lives of previously institutionalized youths*

The previously institutionalized men and women in the sample under study are characterized by a vulnerable background. In general, they grew up in adverse family situations, they were often victimized and suffered from psychological problems. Moreover, their intelligence and educational level was generally low, and they displayed serious behavioral problems. Although the majority of the sample was institutionalized based on a civil-law measure, the larger part of the sample had had contact with the juvenile justice system during adolescence. Prior to age 18, over 80 percent of the boys and over half of the girls were convicted of a serious offense at least once, with conviction frequency being highest for boys.

A large part of these juveniles continued their criminal career into adulthood. Chapters 2, 3, and 4 showed that during the observation period, from ages 18 to 32, over three quarters of the men and over 40 percent of the women were (re)convicted of a serious offense at least once; again, men on average were

(re) onvicted more frequently than women. In addition, more than half of the men and almost one-fifth of the women were incarcerated at some point between ages 18 and 32. For both men and women, participation in criminal behavior decreased with age.

Furthermore, the majority of men and women were employed at some point between ages 18 and 32. Still, 15 percent of the sample was unemployed during the entire observation period. The employment careers of respondents who were employed at some point were highly unstable; both men and women worked several short-lived jobs and experienced multiple spells of unemployment. All in all, employment participation in this sample was much lower compared to the general Dutch population. Unsurprisingly, therefore, a large part of the sample received income support at some point during the observation period, with women more often receiving financial support than men.

Looking at the adult outcomes of previously institutionalized youths, chapter 5, in which the sample was followed up to an average age of 35, demonstrated that a large part of them did not turn out well, at least not to conventional standards. Next to the high unemployment rate, the lives of high-risk men and women are also characterized by difficulties in multiple other adult life domains – they have health problems, struggle with mental health issues, and have to deal with alcohol or drug abuse. Some are incarcerated or institutionalized in mental health facilities. For some men and women, history repeats itself, in the sense that their own children are placed under the care of the Child Protection Board because they were deemed unable to take care of them. In general, previously institutionalized men show poorer outcomes than women.

### 6.2.2 *The importance of employment in altering the criminal career*

The first aim of this dissertation was to examine the effect of employment on offending. Can work contribute to desistance from crime for vulnerable youths, such as James whose story is described at the beginning of this chapter? Or is employment associated with lower levels of offending, because some individuals possess certain characteristics that increase the likelihood to desist from crime as well the likelihood to be successful in conventional life domains such as in the labor market? The findings from chapters 2 and 3 suggest the former: employment can be of great importance in altering the criminal careers of high-risk youths.

In chapter 2, the effects of employment, employment duration, and unemployment duration on serious offending were examined, while controlling for personal and background characteristics. By doing so, this chapter investigated whether a causal relationship between employment and criminal behavior exists and to what extent instantaneous and gradual effects are at play in the relationship between employment and crime. This study showed that employment is associated with a reduction in the number of convictions for serious offenses, for both high-risk men and women, over and above the effects of stable and dynamic controls. Those who are employed show a decrease in their serious offending behavior. Besides an instantaneous effect of employment on offend-



ing, for men, employment has a gradual negative effect on crime as well, as being employed for multiple consecutive years has an additional negative effect on the number of convictions for serious offenses. Furthermore, unemployment duration is associated with an increase in offending for women, whereas for men, a longer unemployment duration slightly decreases the number of convictions.

Furthermore, chapter 3 examined the effects of employment and different types of income support (unemployment benefits, public assistance and disability benefits) on different types of offending. By studying both the effects of employment and income support and by distinguishing between serious, property, and violent offending, the extent to which income or other non-monetary aspects of employment are important in reducing offending could be examined. Similar to chapter 2, this part of the study showed that for both men and women, employment is associated with a significantly lower conviction frequency. Furthermore, receiving income support is correlated with a decrease in serious offending for men, while associated with a marginal increase in offending for women. Distinguishing between three different types of income support demonstrated that the positive effect of receiving income support on crime for women was driven by receiving disability benefits. Finally, when looking at property and violent offending, employment lowered the chance of being convicted of a property crime and of a violent crime for both men and women. Receiving income support is associated with a lower probability of property crime, but only for men, while receiving benefits is unrelated to violent offending for both men and women. In sum, while both men and women who are employed show a decrease in their conviction rate, the effects of income support on crime differ for men and women, as receiving benefits is associated with reduced offending for males but with increased offending for females.

What do these results mean for theories about employment and crime? Both chapters 2 and 3 point to a causal longitudinal association between employment and serious offending. Although there are selection effects at play, being employed is associated with lower levels of offending for high-risk men and women, over and above the effects of stable individual characteristics that are thought to increase both the risk of crime and unemployment (Gottfredson & Hirschi, 1990). Thus, even after controlling for selection effects, employment is associated with a decrease in offending. Therefore, the findings from these chapters particularly lend support for theories that predict a causal effect of employment on offending. Results indicate that both the monetary benefits associated with being employed, as well as the non-monetary aspects of work, might explain the relationship between employment and reduced offending.

To begin with, economic and strain theories state that receiving an income can directly reduce financial motivation for crime (e.g., Agnew, 1992; Becker, 1968; Merton, 1968). According to these theories, employment and income support would reduce offending, since they both generate a legitimate income. Findings from chapter 2 show that formerly institutionalized men and women accrued less convictions in the years that they are employed. Chapter 3 shows that in males income support is associated with a lower serious offending rate as well.



These findings are in line with expectations based on theories emphasizing the financial motivation for crime. Moreover, as was expected based on strain theories, employment and income support were found to have stronger effects on property than on violent offending. These findings suggest that crime is (at least partly) financially motivated.

However, findings differ importantly for men and women. Whereas employment is associated with reduced offending for both men and women, the negative effects of income support on offending were found only for males. Thus, for men, income support and employment appear to relieve financial strain and thereby lower offending. For women, however, the role of income in reducing the financial motivation for crime is less clear, as receiving income support is not associated with a reduction in criminal behavior. On the contrary, for women receiving benefits, and disability benefits in particular, is associated with an increase in offending. These results therefore do not lend support for theories that stress the financial motivation for crime, but indicate that relationship between receiving social security benefits and (reduced) offending is more complex for women than for men. Two explanations can be offered for this.

First, in the high-risk sample under study, women seem often eligible for disability benefits due to psychiatric problems. Although women may also profit from financial support, receiving benefits may thus simultaneously signal psychological conditions that in turn prevent them from desisting. Second, it might be that women experience financial difficulties to a larger degree than men, since many of the women have to take care of their under-aged children, while men less often have or live up to parental obligations. In the current sample, women more often have children than men, and already at very young ages (Zoutewelle-Terovan et al., 2012).

Although the results of this study are to some extent in line with theories that emphasize the financial motivation for crime, it was expected that employment is more than just a source of income. Based on control theories (e.g., Sampson & Laub, 1993), it was hypothesized that other non-monetary aspects associated with being employed are important in reducing criminal behavior as well. Several findings of chapters 2 and 3 lend support for this.

Both chapters 2 and 3 showed that previously institutionalized men and women are less often convicted when they are employed. Whereas this negative effect of employment on offending can be interpreted as resulting from the financial benefits that employment provides, the lower offending rate can also be explained by the experience of structure in daily routines and direct social control when employed (Laub & Sampson, 2003; Shover, 1996). Although this could not be explicitly tested, findings from chapter 3 tentatively support this claim. Based on control theories, it was expected that employment should reduce offending more so than income support, since next to monetary gains employment provides social control whereas income support does not. The findings from chapter 3 confirmed this hypothesis, showing a larger effect of employment on offending than of income support on offending. This indicates that more than merely receiving an income, also the non-monetary aspects of work (such as social control) are important in desisting from crime. Furthermore, employment

affects serious offending, as well as property and violent offending separately. Since many violent offenses are not committed for direct financial gain, this too points to the importance of control in refraining from criminal behavior.

Moreover, as the Dutch welfare state provides those unemployed with a minimum income, financial strain resulting from unemployment should be less than in countries characterized by a less supportive welfare regime. Therefore, finding stronger effects for employment compared to receiving benefits within the context of the Dutch welfare system again highlights the importance of the non-monetary aspects of work – such as social control – in facilitating desistance from crime (see also Savolainen, 2009).

In addition, following Sampson and Laub's theory of informal social control (1993), it was expected that, over and above the negative effect of employment on offending, stable employment would further decrease the conviction frequency of high-risk young adults. This study indeed showed that in addition to the instantaneous effect of employment on offending, continuous employment further decreases offending. This indicates that, as assumed by Sampson and Laub (1993; Laub & Sampson, 2003), especially a good, stable job has the ability to contribute to desistance, because it offers the possibility to tighten the bond to conventional society. Those working in stable, satisfying employment have the opportunity to invest in social capital, and for them, work increasingly becomes a source of informal social control. As a result, the employed individual is increasingly less willing to put his or her job at stake by committing crime, and work thereby gradually fosters the adoption of a conventional, non-criminal lifestyle.

However, continuous employment was found to affect criminal behavior only for men. This might indicate that, at least in this high-risk sample, the meaning of work differs for men and women. Since women, especially those who are low skilled, more often than men work part time and combine their work with other conventional social roles such as being a mother, the importance and meaning of work might be different for women compared to men.

Whereas a negative effect of continued employment was found to be associated with a decrease in criminal behavior, a longer duration of unemployment was expected to be related to an increase in offending, based on research showing detrimental psychosocial consequences of (long-term) unemployment (e.g., Paul & Moser, 2009). However, chapter 2 demonstrated that while a longer unemployment spell is criminogenic for women, for men it is associated with a small decrease in offending. It might be that a longer duration of unemployment is related to an increase in offending for women, because for them, it causes a situation of chronic financial strain to a larger extent than for men since, as mentioned above, women more often have parental obligations. Furthermore, it might be that unemployed high-risk men more often than women are living in secured settings such as treatment centers for alcohol and drug addictions, providing more social control and thereby reducing the opportunities to commit crimes.

In sum, studying the relationship between employment and crime longitudinally demonstrated that, even though employment participation is low in the

sample under study, work is still associated with a reduction in criminal behavior. Building upon the Dutch study by Van der Geest, Bijleveld, and Blokland (2011), this study demonstrated that, besides selection effects, both employment and income support were found to be associated with lower levels of offending, thereby supporting theories that stress the financial motivation for crime. Moreover, the findings of this thesis point to the importance of social control in refraining from criminal behavior. Therefore, this study adds to this existing body of literature examining the work-crime relationship (e.g., Farrington et al., 1986; Sampson & Laub, 1990; Van der Geest, Bijleveld & Blokland, 2011), by showing that work yields the ability to alter the criminal careers of at-risk young adults in the Netherlands.

Moreover, whereas prior research, including the Dutch research by Van der Geest and colleagues (2011), almost exclusively focused on males, this study demonstrated that there are, to some extent, gender differences in the effects of employment on crime. Although certain non-monetary aspects of work, such as direct social control and structure resulting from being employed, appear to be important for both men and women, for women, the role of informal social control in reducing criminal behavior is less supported by the results. Steady employment, which offers the possibility to invest in social capital and gaining a stake in conformity, was found to affect criminal behavior only for men. Moreover, gender differences in the relationship between income support and offending were observed.

Going back to the story of James, employment appears to have played an important role in his life. James knew he needed to work hard to stay on the right track, and his jobs helped him with that. After years of working low-quality jobs, he is very satisfied with his current job at a cable company. According to James, his work is important to him as it gives him self-confidence.

### 6.2.3 *The effects of conviction and incarceration on employment chances*

As discussed above, employment can contribute to desistance from crime. However, especially previously institutionalized youths are, due to their troubled background or due to consequences of their delinquent behavior, at risk of experiencing problems entering the labor market and as a result experience unemployment. Moreover, as shown earlier, the majority of these youths engage in criminal behavior in adulthood. Both a history of unemployment and a criminal background are thought to bring about difficulties finding and keeping employment. To what extent were the employment prospects of Ray, described in the beginning of this chapter, shaped by his history of unemployment history and crime? To shed light on the employment prospects of formerly institutionalized youths, the second aim of this dissertation was to examine to what extent the already limited employment prospects of previously institutionalized youths are further damaged by the official reactions to crime, such as conviction and incarceration. Chapter 4 therefore examined the effects of a history of unemployment, conviction, and incarceration on the probability of being employed.

The findings from chapter 4 indicated that for men, a criminal background does not affect employment prospects when their history of unemployment is taken into account. For men, unemployment in the previous year, the number of unemployment spells, and a longer duration of unemployment are associated with a lower employment probability. When unemployment history is taken into account, no additional detrimental effects of convictions and incarceration, neither incarceration in the previous year, incarceration spells, nor duration, are found.

Results showed that for women, a criminal record does affect employment chances in addition to the detrimental effects of unemployment. Significant negative effects of convictions on employment chances in the subsequent year were found, next to negative effects of a history of unemployment. Similar as for men, a history of incarceration has no additional negative effect on employment probability. For women, being unemployed in the previous year and the number of prior unemployment spells decrease the probability of employment in the subsequent year, whereas unemployment duration has no significant effect on the likelihood of being employed.

Moreover, when only looking at the years in which subjects are unemployed, the models show that for both men and women, a criminal history does not decrease the likelihood of finding a job in the subsequent year. Only unemployment history exerts a considerable negative influence on an individual's future employment chances.

The results from chapter 4 underline the detrimental effects of unemployment history on the employment chances of previously institutionalized youths and are therefore in line with theories from labor economics. To begin with, based on signaling theory it was hypothesized that unemployment history damages future employment chances due to the negative signal it constitutes (Spence, 1973). This study suggests that signaling effects are at play in decreasing one's employment chances. Not only experiencing unemployment per se, but also experiencing multiple unemployment spells and experiencing a prolonged spell of unemployment exert a negative effect on employment. This indicates that gaps in one's work history may signal negative worker characteristics to potential employers, and the more and longer the unemployment spells, the stronger this negative signal, thereby further decreasing the chance of being hired.

In addition, as was expected based on human capital theory (Becker, 1964), particularly longer spells of unemployment decrease employment chances, especially for men. During a prolonged spell of unemployment, vulnerable youths are not only unable to invest in human capital, but their existing skills also erode. Their lack of human capital makes formerly institutionalized youths less attractive job candidates. Taken together, in the labor market, previously institutionalized youths are hindered by assumptions of inferior worker characteristics on part of potential employers, as well as their actual lack of work experience and skills.

Besides the detrimental effects of prior unemployment on future employment outcomes, a history of conviction or incarceration was thought to decrease

employment chances as well, as was expected based on labeling theory (Becker, 1963; Lemert, 1967). According to labeling theory, people who have had contact with the criminal justice system are publicly labeled as deviant and as a result are viewed as undesirable job candidates by employers. This study showed that labeling effects may indeed be at play, however, only with regard to convictions, and only for women. For men, when taking into account their unemployment history, a history of conviction and incarceration does not affect their employment prospects. Thus, no support for labeling theory is found for men; rather, the findings point to the detrimental effects of experiencing unemployment early in the employment career. For women, however, convictions have an adverse effect on the likelihood of employment in the subsequent year, over and above the detrimental effects of experiencing unemployment.

It was also expected that incarceration would negatively affect employment probability, both because of labeling effects and the loss of human capital. However, for both men and women, no additional negative effect of incarceration on the likelihood of employment was found. Incarceration does thus not seem to yield larger labeling effects than mere convictions, and no support for the process of human capital deterioration during incarceration was found.

As convictions were found to lower employment probability only for women, while controlling for the effects of unemployment history, the findings suggest that criminal behavior yields more stigma for women than for men. As fewer women than men engage in crime, the women who do commit crimes might be judged more harshly. In addition, occupational segregation by gender might also offer an explanation for the observed gender differences. Low-skilled women in general work in sectors such as service and retail, whereas low-skilled men apply for jobs in sectors such as construction and manufacturing. Given that the typical female jobs often concern contact with, for example, children or customers or handling cash, the negative characteristics associated with a criminal label can be a reason not to hire a woman with a criminal record. In contrast, in the industries where men work, a criminal record might not necessarily be a bad signal (Holzer et al., 2003).

The Netherlands is characterized by a less punitive penal climate than Anglo-Saxon countries such as the US, where most prior research was carried out. This difference in societal context can help to explain why in this thesis, as opposed to earlier studies (see Raphael, 2014), little evidence for labeling effects was found. In the Netherlands, background screening is regulated by the government. As a result it is more difficult to get access to criminal records for employers in the Netherlands, as opposed to the US where employers can turn to private companies to perform background checks on potential employees. In the Netherlands, previously institutionalized young adults might therefore experience less stigmatization because of their criminal record.

Findings from this dissertation, showing that there is no additional negative effect of incarceration on employment chances, are in contrast with several US-based studies reporting significant detrimental effects of incarceration on employment outcomes (e.g., Apel & Sweeten, 2010; Pettit & Lyons, 2009; Raphael, 2014). This could be related to the relatively mild penal climate in

the Netherlands, because of which prison spells are in general short and more focused on rehabilitation by offering possibilities to participate in work programs and reintegration projects. Therefore, inmates face less human capital deterioration and possibly even have opportunities to increase their human capital while incarcerated. Moreover, the effects of a spell of incarceration on employment chances might be differential, as for some, job opportunities may have deteriorated, whereas for others, job training and reintegration may have improved their job opportunities (Kling, 2006). Although in contrast with most US studies, the findings from this study are in line with another Dutch study by Ramakers et al. (2012), comparing ex-prisoners with a similar but non-imprisoned group of unemployed males who are to experience an incarceration spell in the future. This study demonstrated that ex-prisoners are more likely to find employment, and do so more quickly, than non-imprisoned unemployed males. In sum, the employment prospects of vulnerable youths seem to be severely compromised to begin with, and the negative signal of prior unemployment and the lack of human capital further damages their employment outcomes, more so than a criminal record or history of incarceration. The story of Ray seems to support these findings. Ray has hardly any formal work experience, because of which he was repeatedly turned down by employment agencies. He earns his money through illegal activities, and he seems to have given up on finding a formal job, because, according to Ray, 'Who is going to hire a person with a 9-year gap in his resume?'

#### 6.2.4 *Adult outcomes of previously institutionalized youths*

To what extent are the vulnerable youths who are central to this dissertation able to adjust to adult life when they are in their thirties? As outlined above, the findings from chapters 2, 3, and 4 point – with regards to crime – to the importance of employment and the detrimental effects of unemployment in the lives of previously institutionalized youths. Yet, these chapters also showed that among these youths, employment participation is low and involvement in crime is high. What does this mean for the life courses of previously institutionalized youths such as Ellen and Regina? To what extent do their (un)employment history and criminal history affect the outcomes in other life domains? To answer this question, the third and final aim of this thesis was to examine adult outcomes of previously institutionalized youths and the extent to which employment and crime influence their level of adult life adjustment.

As described earlier, chapter 5 of this dissertation demonstrated that, when previously institutionalized youths are in their thirties, a large part of them is experiencing difficulties in adult life domains. Are vulnerable youths then predetermined to end up doing poorly? The answer to this question is negative. The vulnerable background that is characteristic of previously institutionalized youths does not necessarily predispose them to negative outcomes in the future. Findings from chapter 5 indicate that most of the personal and background characteristics, except for academic failure, are not significantly related to the level of adult life adjustment, a measure comprising several adult life domains



including accommodation, family formation, health, alcohol use, and substance use. However, a higher level of involvement in criminal behavior in adulthood is associated with more difficulties in conventional adult life domains, whereas employment is associated with better adult outcomes.

While static views as those of Gottfredson and Hirschi (1990) predict that certain negative individual characteristics cause difficulties in multiple life domains throughout the life course, this is found not to be the case for the vulnerable youths under study here. For them, childhood risk factors do not predict failure to adapt to conventional life domains. Only academic failure is significantly related to poorer adult outcomes, which points to the importance of education in helping at-risk youths improve their prospects in adulthood.

As was expected based on life-course theories, such as the theory of Sampson and Laub (1993; Laub & Sampson, 2003), change is possible in the lives of high-risk youths. Ties to social institutions, such as employment can act as a turning point and can thereby contribute to positive adult outcomes for vulnerable youths. As work appears to facilitate transitions in other life domains, the ones that manage to make a successful transition to the labor market put themselves in an upward trajectory resulting in better outcomes in adulthood.

However, adult outcomes are worse for those whose criminal career continues into adulthood. Thus, while ties to social institutions such as employment, can bring about positive change in the life course, continued involvement in crime worsens the prospects of vulnerable youths, making it increasingly more difficult to connect to conventional life domains (Sampson & Laub, 1993; 1997). The process of cumulative disadvantage due to continued criminal behavior might especially be at play for men, as they show poorer outcomes in adulthood than women.

In conclusion, this study demonstrated poor adult outcomes for previously institutionalized youths. These findings are in line with the few prior studies on the long-term outcomes of at-risk or delinquent youths (e.g., Farrington et al., 2006; Nilsson & Estrada, 2009). Moreover, this study points to the importance of employment in promoting well-being and success in other life domains. This is illustrated by the story of Regina who, after years of working in prostitution, managed to start an education and find (regular) work and now runs her own business. However, others are at risk of becoming trapped in a downward spiral. To illustrate, although Ellen started a job after leaving the institution, she soon became unable to work due to psychiatric problems. Over the years, she was convicted for several violent offenses. She became alcohol dependent and ended up in an abusive relationship, as a result of which her children were taken away from her.

#### 6.2.5 *Conclusion*

This dissertation examined the role of employment and crime in the adult lives of previously institutionalized youths. These youths are characterized by a troubled background and generally attained a low level of education. The study showed that a large part of these youths experiences difficulties in adulthood.



A considerable number of the men and women struggle to find their way in the labor market. Some seem to try, but fail to transition into steady employment, dropping in and out of employment and experiencing several unemployment spells. Others appear to miss the boat already early in adulthood and are compelled into chronic unemployment, possibly due to addiction or mental health problems. Moreover, the majority of the vulnerable youths get convicted in adulthood, and although involvement in criminal behavior decreases with age, this does not mean they end up doing well. Previously institutionalized youths experience difficulties in several adult life domains when they are well into their thirties.

The first aim of this dissertation was to examine the effect of employment on crime. The longitudinal character of the study allowed for examining whether a causal or spurious relationship between employment and crime exists in this sample of previously institutionalized youths. The study demonstrated that, even though not all high-risk youths are able to make a successful transition to the labor market, employment is shown to contribute to the process of desistance from crime. Although selection effects are at play, the findings from this dissertation also lend support for causal effects of work on crime. Thus, contrary to what the theory of Gottfredson and Hirschi (1990) predicts, employment can be of great importance for youths characterized by a high-risk background in helping them adopt a conventional, non-criminal lifestyle. Although receiving an income can contribute to a reduction in criminal behavior by relieving financial strain, this dissertation especially found support for theories that stress that social control that inheres in employment can prevent people from engaging in crime (Sampson & Laub, 1993; Laub & Sampson, 2003). Labor market participation thus yields the ability to alter the criminal careers of previously institutionalized youths.

The second aim of this thesis was to examine the effects of conviction and incarceration on employment prospects. This study demonstrated that the employment prospects of previously institutionalized youths are severely compromised. Especially the negative signal of prior unemployment and the lack of human capital was found to damage their employment chances. Labeling effects due to a criminal record (Becker, 1963; Lemert, 1967) were only found for females, while a history of incarceration did not decrease the employment probability for men or for women.

Finally, the third aim of this dissertation was to examine to what extent employment history and criminal history influence the level of adult life adjustment for previously institutionalized youths. While most childhood risk factors did not predict adverse adult outcomes, the findings do point to the importance of education in promoting positive outcomes in adulthood. Furthermore, employment contributes to positive outcomes in adulthood, not only in terms of an adult life without crime but also by promoting life success in general. Those who form ties to employment show a higher level of adult life adjustment. For vulnerable youths, employment thus seems a crucial stepping-stone in adopting a conventional lifestyle. Moreover, while employment can function as a turning point in the lives of previously institutionalized youths, adult offending is related

to poorer outcomes in adulthood. Those who engage in criminal behavior in adulthood seem therefore at risk of becoming trapped in a downward spiral, making it increasingly more difficult to connect to conventional life domains (Sampson & Laub, 1993; 1997).

All in all, previously institutionalized youths experience serious difficulties in the labor market. Yet, for those who are able to find and keep a job, the knife cuts both ways as employment reduces criminal activity but also improves future employment prospects and overall life success. Therefore, a successful and lasting transition to the labor market early in adulthood is of great importance for these vulnerable youths. Failure in the labor market puts them at risk of falling through the cracks and can severely compromise their outcomes in adulthood.

In conclusion, for previously institutionalized youths, the road to adulthood is a difficult one, and as the stories of James, Regina, Ellen, and Ray illustrate, outcomes in adulthood can differ greatly. Whereas James and Regina ended up doing relatively well, life is much more difficult for Ellen and Ray. Unfortunately, Ellen and Ray are not the only ones with poor outcomes in adulthood, and their stories are also not the most extreme. Still, previously institutionalized youths are not destined to end up doing poorly in adulthood; rather, employment can bring about positive change in the lives of both at-risk men and women.

### 6.3 IMPLICATIONS FOR POLICY AND PRACTICE

This study showed that even for high-risk youth, despite their troubled backgrounds, employment is of great importance in helping them adopt a conventional, non-criminal lifestyle in adulthood. Therefore, the findings of this dissertation yield important implications for both policy and practice. Interventions aimed at facilitating a successful transition to the labor market are crucial for three reasons. First, employment is associated with desistance from crime. Second, experiencing unemployment is detrimental for later employment chances. And third, employment contributes to a conventional lifestyle in general and promotes vulnerable youths becoming healthy, self-sufficient members of society.

While a successful transition to the labor market is thus of great importance, employment participation among previously institutionalized youths is generally low. As unemployment has detrimental effects on their future employment prospects, high-risk youths will benefit from interventions aimed at increasing employment participation. Moreover, this study strongly suggests that vulnerable youths need continued support to help them *stay* employed, as their employment careers are highly unstable and characterized by multiple unemployment spells.

Although employment is one of the life domains in which interventions can relatively easily be implemented, prior research from the US shows mixed results about the extent to which employment programs achieve their goals. To illustrate, a review by Heinrich and Holzer (2011) shows that some employment

programs for at-risk youths in the US such as vocational education and training programs for disadvantaged youths appear to have the desired effect, at least in the short run, in terms of a higher rate of certificate receipt, increased earnings, and reduced criminal behavior (Bloom et al., 2009; Schochet et al., 2008). However, evaluations of work programs for (adult) ex-offenders in general show limited effects on criminal behavior (Bushway & Reuter, 2002; Visser et al., 2005) or suggest that only certain types of ex-offenders benefit from employment programs, such as those who are older (Uggen, 2000) or those who are at high-risk of re-offending (Zweig, Yahner & Redcross, 2011). Although helping at-risk groups or ex-offenders to become successful in the labor market appears to be complex, findings from this thesis do indicate that support in the domain of employment is crucial for future life success.

Interventions for institutionalized youths should already start during their stay in an institution, as the setting of institutionalization offers the possibility for structured support and training in the employment domain. In addition, aftercare is especially important. The support that vulnerable youths receive from government systems in which they are involved, such as the Dutch Child Protection Board, ends as they reach adulthood. Yet, these youths might not yet have the resources and skills to fend for themselves (Osgood et al., 2005). Therefore, also after institutionalization, efforts should be focused on improving the labor market position for vulnerable youths and facilitate labor market entry. Efforts should be directed not only at helping previously institutionalized youths find a job but also at helping them to stay employed. Furthermore, financial support also appears to have the ability to help people lower their criminal behavior, especially for males. However, supported income should always be combined with job search assistance, given the negative effects of experiencing unemployment on future employment chances. Moreover, special attention should be paid to high-risk women, who in general appear to suffer from a more complex set of psychosocial problems than men and might therefore need more support than just in the domain of employment or financial assistance.

When the youths studied in this dissertation left the institution in the 1990s, aftercare fell short. Since then, efforts were taken to professionalize the support offered to institutionalized youths in order to improve their reintegration process. The Dutch employment program Work-Wise is an intervention for institutionalized youths that aims at improving their employment outcomes by focusing on education and vocational training, during and after institutionalization, with individual help from a case manager. Work-Wise started in 2000 and is since 2007 implemented in all Dutch juvenile (justice) institutions. Although long-term evaluations are not yet available, the program shows promising results in the short run. To illustrate, 75 percent of the juveniles are employed or in school six months after leaving an institution (Work-Wise, 2007). In addition, *Kamers met Kansen* ('Rooms with a Future') is a housing project aimed at increasing social participation among at-risk young adults, by offering them support in the domains of education, work, finances, and independent living. Short-term evaluations show promising results as well (Horjus, De Groot & Horjus, 2006). Evidence-based interventions such as Work-Wise and *Kamers*

*met Kansen* that assist vulnerable youths as they transition to adulthood via participation in the labor market are essential to promote well-being and positive adult outcomes of youths who leave an institution nowadays.

#### 6.4 IMPLICATIONS FOR FUTURE RESEARCH

This study provided insight into the complex relationship between employment and crime. However, future research in this area is needed to further enhance our understanding of the work-crime relationship. To begin with, this dissertation showed that for previously institutionalized youths, employment is associated with a decrease in criminal behavior. Moreover, this study indicated that besides the income that a job generates, especially the social control associated with being employed might explain why employment negatively affects offending. However, as the nature of the data used for this dissertation did not allow for testing all possible mechanisms that might be at play, future research should further examine causal mechanisms responsible for the observed relationship between work and crime.

For example, it might not be employment per se, but especially certain aspects of work, including quality of work and job satisfaction, that determine whether employment affects criminal behavior (Allan & Steffensmeier, 1989; Sampson & Laub, 1993; Uggen, 1999; Wadsworth, 2006). As a result of the data source used in this thesis, namely, the Suwinet register that only provides information on whether an individual is (officially) employed or not, while it lacks information about subjective measures of the experience of work, such as perceived job quality or job satisfaction, the effects of subjective experiences of a particular job on offending could not be examined. Since these are aspects that are important in determining the quality of the bond to employment, which is crucial for desistance according to Sampson and Laub (1993, Laub & Sampson, 2003), future research using measures that capture the subjective experience of work using self-report or qualitative information could shed further light on the mechanisms at play in the relationship between employment and reduced offending.

Furthermore, educational attainment is likely to contribute to improved employment opportunities and thereby to higher job quality and job satisfaction. The measure of educational attainment used in chapters 2 and 3 of this dissertation was collected from the treatment files that were constructed when juveniles were institutionalized in the judicial treatment facility. This means that only information on the level of education before admission in the institution, when juveniles were on average 15 years old, was available. It may very well be that some of the subjects continued to attain some form of education into young adulthood, and the self-report data in chapter 5 indeed shows that this is the case for around 70 percent of the interviewed previously institutionalized youths. Since education might (partly) mediate the relationship between employment and reduced offending (e.g., Bernburg & Krohn, 2003; Tanner, Davies & O'Grady, 1999), it is unfortunate that in this study a more accurate

measure of the level of educational attainment for all subjects from the original sample could not be included. Future research using time-varying variables for educational attainment could shed light on the extent to which educational attainment promotes opportunities for higher-qualified jobs for previously institutionalized youths, which in turn decreases the chances of criminal behavior.

In addition, in this dissertation, analyses were conducted using data divided in yearly intervals. However, this may not be sufficiently fine-grained to capture the temporal ordering of events in the employment and criminal career. Analyzing the work-crime relationship using smaller time intervals can help to enhance our understanding of the causal mechanisms that are at play. To illustrate, a recent study by Skardhamar and Savolainen (2012) examining the effect of employment on officially registered offending using monthly level analyses shows that criminal behavior already declined during the months prior to the moment of job entry, rather than that offending decreased from the moment the job started. This indicates that processes of cognitive transformation might be at play (Giordano, Cernkovich & Rudolph, 2002), meaning that an individual first wants and attempts to desist from crime and then uses conventional adult roles such as employment as a 'hook for change' that can facilitate and reinforce the desistance process.

Moreover, building upon the work of Giordano et al. (2002), as well as on insights from – among other things – social and cognitive psychology and behavioral economics, Paternoster and Bushway (2009) propose an identity theory of desistance from crime and argue that a change in one's identity is necessary for desistance. According to this theory, people have a current identity or 'working self', for example, the image of oneself as a criminal, as well as a future 'possible self'. This possible self can be an image of what a person wants to be or an image of how they do not want to end up. Paternoster and Bushway argue that especially the latter, which they refer to as the 'feared self', acts as an important motivator for desistance. The growing awareness of the accumulating costs of crime and the realization that they might end up as their feared self can make offenders decide to change. This process of identity change is then reinforced by more positive motivations about the person they want to become, for example, a good worker. According to Paternoster and Bushway, offenders will not form bonds to social institutions, such as employment, until they have contemplated the possible self as a non-offender (2009:1105). Therefore, following this theory, any negative effect of employment on crime is not due to the opportunities for change that a job offers but is actually caused by offenders' change in identity following the motivation and decision to desist from crime prior to job entry. Future research could greatly enhance our understanding of the employment-crime relationship by examining these alternative explanations for the observed relationship between employment and reduced offending.

Furthermore, this thesis demonstrated that the employment prospects of previously institutionalized youths are severely compromised. For the high-risk youths studied in this dissertation, particularly for males, a criminal history was not found to affect the probability of finding work *per se*, once prior

unemployment was taken into account. However, it is possible that high-risk young adults do experience stigmatization due to labeling effects, but that this translates into them being compelled in unstable, low-quality jobs, rather than unemployment. Thus, a criminal record or history of incarceration may still affect the chances of finding good-quality, well-paying work (Davies & Tanner, 2003). Given the lack of information about the quality of work in the dataset used in this dissertation, it is as of yet unclear whether high-risk individuals with a criminal record are able to secure high-qualified, satisfying employment, or that they are forced to settle for low-quality and low-paying work. Moreover, future research focusing in more detail on the types of crimes for which one is convicted, as well as studies comparing the employment prospects of at-risk youths with and without a criminal history, might shed light on how employment prospects are affected by labeling effects due to a criminal record or incarceration.

In addition, it might be that, instead of experiencing difficulties with finding a (higher-qualified) job, high-risk men and women are not even looking for formal work. Relying on official register data, they seem to be 'out of the labor force', while in reality, they might choose to work in the informal economy (Fagan & Freeman, 1999; Freeman, 1991). Self-report information is necessary to gain insight into the extent to which vulnerable youths end up working in the black labor market and how that affects offending (see Verbruggen, Van der Geest, and Blokland, (2014)). Furthermore, they might not be interested in finding a regular job, because it can be more lucrative to make money from crime. Investing in 'criminal capital' increases illegal earnings (Loughran, Nguyen, Piquero & Fagan, 2013), and might thereby further increase the distance to the formal labor market.

Moreover, future research using additional self-report information can shed light on the extent to which high-risk youths use the opportunities that adult roles, such as the workplace, offer, to engage in deviant behavior (Felson, 2006; Mars, 1982; Moffitt, 1993; 1994). For example, certain jobs, such as owning a bar or jobs in transport, might be used to facilitate or conceal illegal activities such as drug trafficking (Van Koppen, 2013).

Future research is also necessary to show whether employment prospects of vulnerable youths are affected differently in times of high unemployment rates. The current study examined employment between 1990 and 2010. During most of these years, the Dutch economy performed relatively well, and unemployment levels were low. However, due to the most recent global economic crisis, unemployment levels have risen tremendously, especially among the young. This tightness in the labor market is likely to disproportionately affect vulnerable groups such as previously institutionalized youths (Jongman, Weerman & Kroes, 1993; Nilsson, Bäckman & Estrada, 2013). After all, it will be difficult for vulnerable youths to compete with job applicants with better resumes and no criminal record. Future research will have to show to what extent the employment prospects of at-risk youths are further deteriorated in times of high unemployment rates.



Furthermore, this dissertation points to the detrimental effects of offending on adult outcomes and the importance of employment in promoting life success in general. Although employment is one of the key adult life domains, it is important to study the development of criminal behavior in relation to employment as well as other life domains, such as marriage and parenthood, addiction, and physical and mental health problems. As chapter 5 of this dissertation demonstrated, a substantial part of the high-risk men and women are unsuccessful in multiple adult life domains, and it is likely that failure in one life domain is associated with failure in other life domains. Transitions to adult roles tend to go hand in hand, for example, employed people are more attractive partners, and a job becomes more important for someone who has a family to provide for (Sampson & Laub, 1993; Savolainen, 2009). In addition, alcohol or substance abuse problems, as well as physical and mental health problems, make it difficult, if not impossible, to successfully participate in the labor market. Moreover, especially drug abuse is related to criminal behavior (e.g., Bennet & Holloway, 2009; Goldstein, 1985; Gossop et al., 2000). In this dissertation, marriage and parenthood were only included as control variables, and time-varying data on addiction and health problems were regrettably unavailable. Future research can help untangle the relationship between the criminal career and developments in other life domains.

Finally, this thesis has demonstrated that women deserve more attention from researchers examining the work-crime relationship, as this study indicated that there are gender differences in the relationship between employment and crime. Future research should therefore focus on why there are differences between men and women with regard to the effects of employment and unemployment on criminal behavior, as well as in the effects of criminal history on employment outcomes. Especially the relationship between income support and offending, and the background and life circumstances of benefits recipients, needs further study, also in countries with different welfare regimes, to better understand when and for whom a supported income can help reducing criminal behavior.

To close, in a few years most men and women in the 17Up study will have celebrated their 40th birthday. Additional data collection, for example, on respondents' subjective experiences of work, involvement in informal or illegal ways to earn money, and work-related criminal behavior, as well as retrospectively collected longitudinal information on other adult life domains, could help address at least some of the avenues for future research mentioned above. In addition, future data collection on an already sampled matched comparison group can help shed light on the generalizability of the findings from this thesis.





## REFERENCES

- Aebi, M. F., & Delgrande, N. (2011). Council of Europe Annual Penal Statistics SPACE I: Survey 2011 (Report PC-CP (2013) 5). Council of Europe, Strasbourg, France. Available at: [http://www3.unil.ch/wpmu/space/files/2013/05/SPACE-1\\_2011\\_English.pdf](http://www3.unil.ch/wpmu/space/files/2013/05/SPACE-1_2011_English.pdf)[http://www.coe.int/t/dghl/standardsetting/cdpc/bureau%20documents/PC-CP\(2011\)3%20E%20-%20SPACE%20I%202009.pdf](http://www.coe.int/t/dghl/standardsetting/cdpc/bureau%20documents/PC-CP(2011)3%20E%20-%20SPACE%20I%202009.pdf)
- Agnew, R. (1985). A revised strain theory of delinquency. *Social Forces*, 64, 151-167.
- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30, 47-87.
- Agnew, R. (2001). Building on the foundation of general strain theory: specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency*, 38(4), 319-361.
- Agnew, R. (2006). *Pressured into crime: an overview of general strain theory*. Los Angeles, CA: Roxbury.
- Allan, E. A., & Steffensmeier, D. J. (1989). Youth, underemployment, and property crime – differential effects of job availability and job quality on juvenile and young adult arrest rates. *American Sociological Review*, 54(1), 107-123.
- Allison, P. D. (2005). *Fixed effects regression methods for longitudinal data using SAS*. Cary, N.C., SAS Institute.
- American Psychiatric Association (Ed.). (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR*. Washington, DC: American Psychiatric Pub.
- Apel, R. & Sweeten, G. (2010). The impact of incarceration on employment during the transition to adulthood. *Social Problems*, 57, 448-479.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469-480.
- Arnett, J. J. (2004). *Emerging adulthood; the winding road from the late teens through the twenties*. Oxford: Oxford University Press.
- Arts, W., & Gelissen, J. (2002). Three worlds of welfare capitalism or more? A state-of-the-art report. *Journal of European Social Policy*, 12, 137-158.
- Arulampalam, W., Booth, A. L., & Taylor, M. P. (2000). Unemployment persistence. *Oxford Economic Papers-New Series*, 52, 24-50.
- Arulampalam, W. (2001). Is unemployment really scarring? effects of unemployment experiences on wages. *Economic Journal*, 111(475), F585-F606.
- Arulampalam, W., Gregg, P., & Gregory, M. (2001). Unemployment scarring. *Economic Journal*, 111(475), F577-F584.
- Bachman, J. G., & Schulenberg, J. (1993). How part-time work intensity relates to drug-use, problem behavior, time use, and satisfaction among high-school seniors - Are these consequences or merely correlates. *Developmental Psychology*, 29(2), 220-235.
- Barron, J. M., Black, D. A., & Loewenstein, M. A. (1993). Gender differences in training, capital, and wages. *Journal of Human Resources*, 28(2), 343-364.

- Bartusch, D. J., & Matsueda, R. L. (1996). Gender, reflected appraisals, and labeling: A cross-group test of an interactionist theory of delinquency. *Social Forces*, 75, 145-176.
- Baumer, E. P., & Gustafson, R. (2007). Social organization instrumental crime: Assessing the empirical validity of classic and contemporary anomie theories. *Criminology*, 45, 617-663.
- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: University of Chicago Press.
- Becker, G. S. (1968). Crime and punishment: An economic approach. *Journal of Political Economy*, 76, 169-217.
- Becker, H. (1963). *Outsiders: Studies in the sociology of deviance*. New York: Free Press.
- Belknap, J., & Holsinger, K. (2006). The gendered nature of risk factors for delinquency. *Feminist Criminology*, 1, 48-71.
- Bennet, T., & Holloway, K. (2009). The causal connection between drug misuse and crime. *British Journal of Criminology*, 49, 513-531.
- Berk, R. A., Lenihan, K. J., & Rossi, P. H. (1980). Crime and poverty: Some experimental evidence from ex-offenders. *American Sociological Review*, 45, 766-786.
- Berk, R. A., & Rauma, D. (1983). Capitalizing on nonrandom assignment to treatments: A regression-discontinuity evaluation of a crime-control program. *Journal of the American Statistical Association*, 78, 21-27.
- Bernburg, J. G., & Krohn, M. D. (2003). Labeling, life chances, and adult crime: The direct and indirect effects of official intervention in adolescence on crime in early adulthood. *Criminology*, 41, 1287-1318.
- Blau, F. D., & Kahn, L. M. (2000). Gender differences in pay. *Journal of Economic Perspectives*, 14(4), 75-99.
- Blau, F. D., Brummund, P., & Liu, A. Y. H. (2013). Trends in occupational segregation by gender 1970-2009: Adjusting for the impact of changes in the occupational coding system. *Demography*, 50(2), 471-492.
- Block, C. R., Blokland, A. A. J., Van der Werff, N., Van Os, R., & Nieuwebeerta, P. (2010). Long-term patterns of offending in women. *Feminist Criminology*, 5(1), 73-107.
- Blokland, A. A. J., & Nieuwebeerta, P. (2010). Life course criminology. In S. G. Shoham & P. Knepner (Eds.), *International handbook of criminology* (pp. 51-94). Boca Raton: CRC Press / Taylor and Francis.
- Blokland, A. A. J., & Palmen, H. (2012). Criminal career patterns. In R. Loeber, M. Hoeve, N.W. Slot, & P. H. van der Laan (Eds.), *Persisters and desisters in crime from adolescence into adulthood: explanation, prevention and punishment* (pp. 13-50). Surrey, UK: Ashgate.
- Bloom, D., Gardenhire-Crooks, A., & Mandsager, C. (2009). *Reengaging high school dropouts: Early results of the National Guard ChalleNge Program evaluation*. New York, NY: MDRC.
- Boendermaker, L. (1999). *Justitiële behandelinrichtingen voor jongeren*. Leuven-Apeldoorn: Garant.
- Böheim, R., & Taylor, M. P. (2000). *Unemployment duration and exit states in Britain*, ISER Working Paper 2000-01, University of Essex.
- Böheim, R., & Taylor, M. P. (2002). The search for success: Do the unemployed find stable employment? *Labour Economics*, 9, 717-735.
- Boone, M. (2012). Criminal records as an instrument of incapacitation. In M. Malsch & M. Duker (Eds.), *Incapacitation. Trends and new perspectives* (pp. 203-219). Surrey: Ashgate.
- Boshier, R., & Johnson, D. (1974). Does conviction affect employment opportunities? *British Journal of Criminology*, 14, 264-268.
- Box, S., & Hale, C. (1984). Liberation / emancipation, economic marginalization, or less chivalry – The relevance of three theoretical arguments to female crime patterns in England and Wales, 1951-1980. *Criminology*, 22(4), 473-497.
- Brame, R., Paternoster, R., Mazerolle, P., & Piquero, A. (1998). Testing the equality of maximum likelihood regression coefficients between two independent equations. *Journal of Quantitative Criminology*, 14, 245-261.

- Broidy, L., & Agnew, R. (1997). Gender and crime: A general strain theory perspective. *Journal of Research in Crime and Delinquency*, 34, 275-306.
- Buikhuisen, W., & Dijksterhuis, F. P. H. (1971). Delinquency and stigmatization. *British Journal of Criminology*, 11, 185-187.
- Bullis, M., & Yovanoff, P. (2006). Idle hands: Community employment experiences of formerly incarcerated youth. *Journal of Emotional and Behavioral Disorders*, 14(2), 71-85.
- Burek, M. W. (2006). AFDC to TANF: The effects of welfare reform on instrumental and expressive crimes. *Criminal Justice Studies*, 19, 241-256.
- Burgess, S., Propper, C., Rees, H., & Shearer, A. (2003). The class of 1981: The effects of early career unemployment on subsequent unemployment experiences. *Labour Economics*, 10, 291-309.
- Bushway, S. D. (1998). The impact of an arrest on the job stability of young white American men. *Journal of Research in Crime and Delinquency*, 35, 454-479.
- Bushway, S. D., & Reuter, P. (2002). Labor markets and crime risk factors. In L. W. Sherman, D. P. Farrington, B. C. Welsh & D. Layton MacKenzie (Eds.), *Evidence-based crime prevention* (pp. 198-240). New York: Routledge.
- Bushway, S. D., Briggs, S., Taxman, F. S., Thanner, M., & Van Brakle, M. (2007). Private providers of criminal history records: Do you get what you pay for? In S. D. Bushway, M. A. Stoll, & D. F. Weiman (Eds.), *Barriers to reentry? The labor market for released prisoners in post-industrial America* (pp. 174-200). New York: Russell Sage Foundation Press.
- Bushway, S. D., Nieuwebeerta, P., & Blokland, A. A. J. (2011). The predictive value of criminal background checks: Do age and criminal history affect time to redemption? *Criminology*, 49(1), 27-60.
- Cameron, A. C., & Trivedi, P. K. (1986). Econometric models based on count data: Comparisons and applications of some estimators. *Journal of Applied Econometrics*, 1, 29-53.
- Cameron, A. C., & Trivedi, P. K. (1998). *Regression analysis of count data*. New York: Cambridge University Press.
- Cantillon, B. (2004). From Belgium: Bea Cantillon on lessons from the US. In E. de Gier, A. de Swaan, & M. Ooijens (Eds.), *Dutch welfare reform in an expanding Europe: The neighbours' view* (pp. 171-199). Amsterdam: Het Spinhuis.
- Carmichael, F., & Ward, R. (2001). Male unemployment and crime in England and Wales. *Economics Letters*, 73(1), 111-115.
- Caspi, A., & Moffitt, T. E. (1995). The continuity of maladaptive behavior: From description to understanding in the study of antisocial behavior. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology*, Vol. 2: Risk, disorder, and adaptation (pp. 472-511). New York: Wiley.
- Caspi, A., Wright, B. R. E., Moffitt, T. E., & Silva, P. A. (1998). Early failure in the labor market: Childhood and adolescent predictors of unemployment in the transition to adulthood. *American Sociological Review*, 63, 424-451.
- CBS Statline (2013). *Sterftetabellen* [Death rate]. Retrieved from <http://www.statline.cbs.nl>, May 1, 2013.
- CBS Statline (2013). *Medical specialist and medication use*. Retrieved from <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=7042MC&D1=122-123,129,140,360-361,367&D2=0-1,5,10,15,1&HDR=G1&STB=T&VW=T>, May 5, 2013.
- CBS Statline (2013). *In justitiële jeugdinrichting, strafrechtelijke titel (12 tot 18 jaar)*. [In juvenile justice institution, criminal law measure (ages 12 to 18)]. Retrieved from <http://jeugd-monitor.cbs.nl/nl-NL/menu/indicatoren/justitie/in-just-jeugdinrichting-strafr-titel.htm?showindicators=true>, May 30, 2013.
- CBS Statline (2013). *Personen in institutionele huishoudens* [Persons in institutions]. Retrieved from <http://statline.cbs.nl/StatWeb/publication/?DM=SLNL&PA=37620&D1=a&D2=0&D3=0,103,105,107&D4=0,5,10,15-17&HDR=T&STB=G1,G2,G3&VW=T>, June 19, 2013.
- CBS Statline (2013). *Employment participation*. Retrieved from <http://statline.cbs.nl>, May 30, 2013.

- Chesney-Lind, M. (1989). Girls' crime and woman's place: Toward a feminist model of female delinquency. *Crime and Delinquency*, 35, 5-29.
- Chiricos, T. G. (1987). Rates of crime and unemployment: An analysis of aggregate research evidence. *Social Problems*, 34(2), 187-212.
- Chung, H. L., Little, M., & Steinberg, L. (2005). The transition to adulthood for adolescents in the juvenile justice system: A developmental perspective. In W. D. Osgood, E. M. Foster, C. Flanagan, & G. R. Ruth (Eds.), *On your own without a net: The transition to adulthood for vulnerable populations* (pp. 68-91). Chicago: University of Chicago Press.
- Cloward, R. A., & Ohlin, L. E. (1960). *Delinquency and opportunity*. New York: Free Press.
- Cohen, L. E. & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review*, 44, 588-608.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95-S120.
- Cook, P. J., & Zarkin, G. A. (1985). Crime and the business cycle. *Journal of Legal Studies*, 14, 115-128.
- Crosnoe, R., & Elder Jr, G. H. (2002). Successful adaptation in the later years: A life course approach to aging. *Social Psychology Quarterly*, 65(4), 309-328.
- Crutchfield, R. D., & Pitchford, S. R. (1997). Work and crime: The effects of labor stratification. *Social Forces*, 76(1), 93-118.
- Davies, S., & Tanner, J. (2003). The long arm of the law: Effects of labeling on employment. *Sociological Quarterly*, 44, 385-404.
- De Beer, P. (2005). *Perspectief op de arbeidsmarkt*. Houten: Bohn Stafleu van Loghum.
- DeFronzo, J. (1996). Welfare and burglary. *Crime & Delinquency*, 42(2), 223-230.
- DeFronzo, J. (1997). Welfare and homicide. *Journal of Research in Crime and Delinquency*, 34, 395-406.
- De Gier, E., & Ooijens, M. (2004). The Dutch welfare state and social security system. In E. de Gier, A. de Swaan, & M. Ooijens (Eds.), *Dutch welfare reform in an expanding Europe: The neighbours' view* (pp. 15-31). Amsterdam: Het Spinhuis.
- De Graaf, R., Ten Have, M., & Van Dorsselaer, S. (2010). *De psychische gezondheid van de Nederlandse bevolking: NEMESIS-2: opzet en eerste resultaten*. Trimbos-instituut: Utrecht.
- De Mooij, R. A. (2006). *Reinventing the welfare state*. The Hague: CPB, Netherlands Bureau for Economic Policy Analysis.
- De Witte, H. (1993). Psychological consequences of long-term unemployment – review of the literature. *Psychologica Belgica*, 33(1), 1-35.
- Dolado, J. J., Felgueroso, F., & Jimeno, J. F. (2001). Female employment and occupational Changes in the 1990s: How is the EU performing relative to the US? *European Economic Review*, 45(4-6), 875-889.
- Donker, A.G. (2004). *Precursors and prevalence of young-adult and adult delinquency* (Doctoral dissertation). Universiteit Leiden, Leiden.
- Ehrlich, I. (1973). Participation in illegitimate activities – theoretical and empirical investigation. *Journal of Political Economy*, 81, 521-565.
- Elliott, C., & Ellingworth, D. (1996). The relationship between unemployment and crime - a cross-sectional analysis employing the British crime survey 1992. *International Journal of Manpower*, 17(6-7), 81-88.
- Eme, R. F. (1992). Selective female affliction in the developmental disorders of childhood: A literature review. *Journal of Clinical Child Psychology*, 21, 354-364.
- Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Cambridge, UK: Polity Press.
- Fagan, J., & Freeman, R. B. (1999). Crime and work. In M. Tonry (Ed.), *Crime and justice: A review of research*, Vol. 25 (pp. 225-290). Chicago: University Chicago Press.
- Farrington, D. P., Gallagher, B., Morley, L., St Ledger, R. J., & West, D. J. (1986). Unemployment, school leaving, and crime. *British Journal of Criminology*, 26(4), 335-356.

- Farrington, D. P., Coid, J. W., Harnett, L., Jolliffe, D., Soteriou, N., Turner, R., & West, D. J. (2006). *Criminal careers up to age 50 and life success up to age 48: New findings from the Cambridge study in delinquent development* (Research Study 299). London: Home Office.
- Felson, M. (2006). *Crime and nature*. Thousand Oaks: Sage.
- Fergusson, D. M., & Horwood, L. J. (1998). Early conduct problems and later life opportunities. *Journal of Child Psychology and Psychiatry*, 39(8), 1097-1108.
- Fergusson, D. M., Horwood, L. J., & Woodward, L. J. (2001). Unemployment and psychosocial adjustment in young adults: Causation or selection? *Social Science & Medicine*, 53(3), 305-320.
- Freedman, D., Thornton, A., Camburn, D., Alwin, D., & Young-DeMarco, L. (1988). The life history calendar: A technique for collecting retrospective data. *Sociological Methodology*, 18, 37-68.
- Freeman, R. (1991). *Crime and the employment of disadvantaged youth*. NBER Working Paper no. 3875. Cambridge: National Bureau of Economic Research.
- Freeman, R.B., & Rodgers III, W. M. (1999). *Area economic conditions and the labor market outcomes of young men in the 1990s expansion*. NBER Working Paper no. 7073. Cambridge: National Bureau of Economic Research.
- Gemeenschappelijke Gezondheidsdienst (2005). *GGD Health Monitor*. Derived from <https://www.monitorgezondheid.nl/volksindicatoren.aspx>.
- Giordano, P. C., Cernkovich, S. A., & Rudolph, J. L. (2002). Gender, crime, and desistance: Toward a theory of cognitive transformation. *American Journal of Sociology*, 107(4), 990-1064.
- Glueck, S., & Glueck, E. (1950). *Unraveling juvenile delinquency*. New York: Commonwealth Fund.
- Glueck, S., & Glueck, E. (1968). *Delinquents and nondelinquents in perspective*. Cambridge, Mass.: Harvard University Press.
- Goldstein, P. (1985). The drug/violence nexus: A tripartite conceptual framework. *Journal of Drug Issues*, 15(4), 493-506.
- Gossop, M., Marsden, J., Stewart, D., & Rolfe, A. (2000). Reductions in acquisitive crime and drug use after treatment of addiction problems: 1-year follow-up outcomes. *Drug and Alcohol Dependence*, 58(1), 165-172.
- Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.
- Gregg, P. (2001). The impact of youth unemployment on adult unemployment in the NCDS. *Economic Journal*, 111(475), F626-F653.
- Gregg, P., & Tominey, E. (2005). The wage scar from male youth unemployment. *Labour Economics*, 12, 487-509.
- Gregory, M., & Jukes, R. (2001). Unemployment and subsequent earnings: Estimating scarring among British men 1984-94. *Economic Journal*, 111(475), F607-F625.
- Grogger, J. (1998). Market wages and youth crime. *Journal of Labor Economics*, 16, 756-791.
- Hagan, J. (1993). The social embeddedness of crime and unemployment. *Criminology*, 31, 465-491.
- Hagan, J., McCarthy, B., & Foster, H. (2002). A gendered theory of delinquency and despair in the life course. *Acta Sociologica*, 45, 37-46.
- Hale, C., & Sabbagh, D. (1991). Testing the relationship between unemployment and crime - a methodological comment and empirical analysis using time-series data from England and Wales. *Journal of Research in Crime and Delinquency*, 28(4), 400-417.
- Hamerlynck, S. M. J. J., Jansen, L. M.C., Doreleijers, T. A. H., Vermeiren, R. R. J. M., & Cohen-Kettenis, P. T. (2009). Civiel- en strafrechtelijk geplaatste meisjes in justitiële jeugdinrichtingen; psychiatrische stoornissen, traumatisering en psychosociale problemen. *Tijdschrift voor Psychiatrie*, 51(2), 87-96.
- Haney, L. A. (2000). Feminist state theory: Applications to jurisprudence, criminology, and the welfare state. *Annual Review of Sociology*, 26, 641-666.
- Hannon, L., & DeFronzo, J. (1998). Welfare and property crime. *Justice Quarterly*, 15, 273-288.
- Harding, L., & Sewel, J. (1992). Psychological health and employment status in an Island community. *Journal of Occupational and Organizational Psychology*, 65, 269-275.

- Hausman, J. (1978). Specification tests in econometrics. *Econometrica*, 46, 1251-1271.
- Heckman, J. J., & Borjas, G. J. (1980). Does unemployment cause future unemployment - definitions, questions and answers from a continuous-time model of heterogeneity and state dependence. *Economica*, 47, 247-283.
- Heinrich, C. J., & Holzer, H. J. (2011). Improving education and employment for disadvantaged young men: proven and promising strategies. *Annals of the American Academy of Political and Social Science*, 635, 163-191.
- Hendriks, J., & Bijleveld, C. C. J. H. (2004). *Recidive van jeugdige zedendelinquenten*. Leiden: Nederlands Studiecentrum Criminaliteit en Rechtshandhaving.
- Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence – Causal relationships and underlying mechanisms. *Psychological Bulletin*, 111(1), 127-155.
- Hirschi, T. (1969). *Causes of delinquency*. Berkeley: University of California Press.
- Holzer, H. J., Raphael, S., & Stoll, M. A. (2003). Employment barriers facing ex-offenders. Retrieved July 2, 2012 ([http://www.urban.org/UploadedPDF/410855\\_holzer.pdf](http://www.urban.org/UploadedPDF/410855_holzer.pdf)).
- Holzer, H. J., Raphael, S., & Stoll, M. A. (2004). Will employers hire ex-offenders? Employer preferences, background checks and their determinants. In M. Patillo-McCoy, D. Weiman, & B. Western (Eds.), *Imprisoning America: The social effects of mass incarceration* (pp. 205-246). New York: Russell Sage Foundation.
- Horjus, B., De Groot, J., & Horjus, N.B. (2006). *Wonen, wennen, werken, wijzer worden en weer zelfstandig op weg gaan. Evaluatie van de Kamers met Kansen 2004-2005*. Zeist: H&P/Rotterdam: SEV.
- Horney, J., Osgood, D. W., & Marshall, I. H. (1995). Criminal careers in the short-term: Intra-individual variability in crime and its relation to local life circumstances. *American Sociological Review*, 60(5), 655-673.
- Hulin, C. L. (2002). Lessons from industrial and organizational psychology. In J. Brett & F. Drasgow (Eds.), *The psychology of work: Theoretically based empirical research* (pp. 3-22). Mahwah, NJ: Erlbaum.
- Hult, C. (2008). Gender, culture and non-financial employment commitment in Great Britain and Sweden. *European Societies*, 10(1), 73-96.
- International Centre for Prison Studies (2013). Entire world - Prison population rates per 100,000 of the national population. Retrieved from [http://www.prisonstudies.org/info/worldbrief/wpb\\_country.php?country=190](http://www.prisonstudies.org/info/worldbrief/wpb_country.php?country=190), July 18, 2013.
- Jackman, R., & Layard, R. (1991). Does long-term unemployment reduce a person's chances of a job? A time-series test. *Economica*, 58, 93-106.
- Jacobson, L. S., LaLonde, R. J., & Sullivan, D. G. (1993). Earning losses of displaced workers. *American Economic Review*, 83, 685-709.
- Jahoda, M. (1982). *Employment and unemployment. A social-psychological analysis*. Cambridge: Cambridge University Press.
- Jeugdzorg Nederland [Youth care the Netherlands] (2011). *Brancherapportage Jeugdzorg 2010*. Utrecht: Jeugdzorg Nederland.
- Jeugdzorg Nederland [Youth care the Netherlands] (2013). *Brancherapportage Jeugdzorg 2011*. Utrecht: Jeugdzorg Nederland.
- Jongman, R. W. (1982). Criminaliteit als gevolg van uitstoting uit het arbeidsproces. *Tijdschrift voor Criminologie*, 24, 3-20.
- Jongman, R., Weerman, F., & Kroes, L. (1993). Maatschappelijke tweedeling en criminaliteit. In R. W. Jongman (Ed.), *De armen van Vrouwe Justitia. Sociale positie, criminaliteit en justitiële reacties* (pp. 129-140). Nijmegen: Ars Aequi Libri.
- Kling, J. R. (2006). Incarceration length, employment, and earnings. *American Economic Review*, 96, 863-876.
- Kratzer, L., & Hodgins, S. (1997). Adult outcomes of child conduct problems: A cohort study. *Journal of Abnormal Child Psychology*, 25(1), 65-81.



- Kulik, L. (2000). Jobless men and women: A comparative analysis of job search intensity, attitudes toward unemployment, and related responses. *Journal of Occupational and Organizational Psychology*, 73, 487-500.
- LaLonde, R. J., & Cho, R. M. (2008). The impact of incarceration in state prison on the employment prospects of women. *Journal of Quantitative Criminology*, 24, 243-265.
- Lancôt, N., Cernkovich, S. A., & Giordano, P. C. (2007). Delinquent behavior, official delinquency, and gender: Consequences for adulthood functioning and well-being. *Criminology*, 45, 131-157.
- Latten, J. (2004). *Trends in samenwonen en trouwen. De schone schijn van burgerlijke staat*. [Trends in cohabitation and marriage]. Centraal Bureau voor Statistiek, Bevolkingstrends, 4e kwartaal 2004.
- Laub, J. H., & Sampson, R. J. (2001). Understanding desistance from crime. In M. Tonry (Ed.), *Crime and justice: A review of research*, Vol. 28 (pp. 1-69). Chicago: University of Chicago Press.
- Laub, J. H., & Sampson, R. J. (2003). *Shared beginnings, divergent lives; delinquent boys to age 70*. Cambridge: Harvard University Press.
- Layte, R., Levin, H., Hendrickx, J., & Bison, I. (2000). Unemployment and cumulative disadvantage in the labour market. In D. Gallie & S. Paugam (Eds.), *Welfare regimes and the experience of unemployment in Europe* (pp. 153-174). Oxford: Oxford University Press.
- Lemert, E. (1967). *Human deviance, social problems and social control*. Englewood Cliffs, N.J.: Prentice Hall.
- Lewis, D. O., Yeager, C. A., Lovely, R., Stein, A., & Cobhamportorreal, C. S. (1994). A clinical follow-up of delinquent males – ignored vulnerabilities, unmet needs, and the perpetuation of violence. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33(4), 518-528.
- Linckens, P., & De Looff, J. (2013). *Gevangeniswezen in getal. 2008-2012. Dienst Justitiële Inrichtingen*. Ministerie van Veiligheid en Justitie.
- Liska, A. E., & Messner, S. F. (1999). *Perspectives on crime and deviance*. Englewood Cliffs, N.J.: Prentice Hall.
- Loeber, R., Farrington, D. P., & Waschbusch, D. A. (1998). Serious and violent juvenile offenders. In R. Loeber & D. P. Farrington (Eds.), *Serious and violent juvenile offenders: Risk factors and successful interventions* (pp. 13-29). Thousand Oaks, CA: Sage.
- Lopes, G., Krohn, M. D., Lizotte, A. J., Schmidt, N. M., Vasquez, B. E., & Bernburg, J. G. (2012). Labeling and cumulative disadvantage: The impact of formal police intervention on life chances and crime during emerging adulthood. *Crime & Delinquency*, 58, 456-488.
- Loughran, T. A., Nguyen, H., Piquero, A. R., & Fagan, J. (2013). The returns to criminal capital. *American Sociological Review*, 78, 925-948.
- Luijckx, R., & Wolbers, M. (2009). The effects of non-employment in early work-life on subsequent employment chances of individuals in the Netherlands. *European Sociological Review*, 25(6), 647-660.
- MacKenzie, D. L., & De Li, S. (2002). The impact of formal and informal social controls on the criminal activities of probationers. *Journal of Research in Crime and Delinquency*, 39(3), 243-276.
- Mallar, C. D., & Thornton, C. V. D. (1978). Transitional aid for released prisoners: Evidence from the LIFE experiment. *Journal of Human Resources*, 13, 208-236.
- Mars, G. (1982). *Cheats at work. An anthropology of workplace crime*. London: Unwin Paperbacks.
- Maruna, S. (2001). *Making good: How ex-convicts reform and rebuild their lives*. Washington, DC: American Psychological Association Books.
- McDowell, I. (2006). *Measuring health: a guide to rating scales and questionnaires, third edition*. New York: Oxford University Press.
- McFayden, R. G. (1995). Coping with threatened identities: Unemployed people's self-categorizations. *Current Psychology*, 14(3), 233-257.
- McKee-Ryan, F. M., Song, Z. L., Wanberg, C. R., & Kinicki, A. J. (2005). Psychological and physical well-being during unemployment: A meta-analytic study. *Journal of Applied Psychology*, 90(1), 53-76.

- Megens, K., & Day S. (2007). Delinquentie van meisjes: Over de relatie tussen risicofactoren en delinquent gedrag na behandeling in een JJI [Delinquency of girls. On the relationship between risk factors and delinquent behavior after residential treatment]. *Tijdschrift voor Criminologie*, 49(4), 370-385.
- Merton, R. K. (1938). Social structure and anomie. *American Sociological Review*, 3, 672-682.
- Merton, R. K. (1968). *Social theory and social structure*. New York: Free Press.
- Messerschmidt, J. W. (1993). *Masculinities and crime: Critique and reconceptualization of theory*. Lanham, MD: Rowan and Littlefield.
- Miedema, S. (1997). *Het peilen van de diepte: De relatie tussen werkloosheid en delinquentie bij jongvolwassen mannen* (Doctoral dissertation). Groningen, Faculteit der Rechtsgeleerdheid RUG.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior - A developmental taxonomy. *Psychological Review*, 100(4), 674-701.
- Moffitt, T. E. (1994). Natural histories of delinquency. In E. G. M. Weitekamp & H. Kerner (Eds.), *Cross-national longitudinal research on human development and criminal behavior* (pp. 3-61). Dordrecht: Kluwer Academic.
- Moffitt, T. E., & Caspi, A. (2001). Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways among males and females. *Development and Psychopathology*, 13, 355-375.
- Moffitt, T. E., Caspi, A., Harrington, H., & Milne, B. J. (2002). Males on the life-course-persistent and adolescence-limited antisocial pathways: Follow-up at age 26 years. *Development and Psychopathology*, 14(1), 179-207.
- Moffitt, T. E. (2006). Life-course persistent versus adolescence-limited antisocial behavior. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology* (pp. 570-598). New York: John Wiley.
- Mooi-Reçi, I. (2008). *Unemployed and scarred for life? Longitudinal analyses of how unemployment and policy changes affect re-employment careers and wages in the Netherlands, 1980-2000* (Doctoral dissertation). Vrije Universiteit, Amsterdam.
- Mühleisen, M., & Zimmermann, K. F. (1994). New patterns of labor mobility - a panel analysis of job changes and unemployment. *European Economic Review*, 38, 793-801.
- Nagin, D., & Waldfoegel, J. (1995). The effects of criminality and conviction on the labor-market status of young British offenders. *International Review of Law and Economics*, 15(1), 109-126.
- Narendranathan, W., & Elias, P. (1993). Influences of past history on the incidence of youth unemployment - empirical findings for the UK. *Oxford Bulletin of Economics and Statistics*, 55, 161-185.
- Nilsson, A., & Estrada, F. (2009). *Criminality and life-chances. A longitudinal study of crime, childhood circumstances and living conditions up to age 48*. Department of Criminology Report Series, Report 2009:3.
- Nilsson, A., & Estrada, F. (2011). Established or excluded? A longitudinal study of criminality, work and family formation. *European Journal of Criminology*, 8, 229-245.
- Nilsson, A., Bäckman, O., & Estrada, F. (2013). Involvement in crime, individual resources and structural constraints processes of cumulative (dis)advantage in a Stockholm birth cohort. *British Journal of Criminology*, 53(2), 297-318.
- Nordenmark, M. (1999). Employment commitment and psychological well-being among unemployed men and women. *Acta Sociologica*, 42(2), 135-146.
- Odgers, C. L., Caspi, A., Broadbent, J. M., Dickson, N., Hancox, R. J., Harrington, H., Poulton, R., Sears, M. R., Thomson, W. M., & Moffitt, T. E. (2007). Prediction of differential adult health burden by conduct problem subtypes in males. *Archives of General Psychiatry*, 64(4), 476-484.
- Omori, Y. (1997). Stigma effects of nonemployment. *Economic Inquiry*, 35, 394-416.
- Orloff, A. (1996). Gender in the welfare state. *Annual Review of Sociology*, 22, 51-78.
- Osgood, D. W., Foster, E. M., Flanagan, C., & Ruth, G. R. (2005). *On your own without a net: The transition to adulthood for vulnerable populations*. Chicago: University of Chicago Press.
- Pager, D. (2003). The mark of a criminal record. *American Journal of Sociology*, 108(5), 937-975.

- Pager, D., Western, B., & Sugie, N. (2009). Sequencing disadvantage: Barriers to employment facing young black and white men with criminal records. *Annals of the American Academy of Political and Social Science*, 623, 195-213.
- Palmer, E. J., Jinks, M., & Hatcher, R. M. (2010). Substance use, mental health, and relationships: A comparison of male and female offenders serving community sentences. *International Journal of Law and Psychiatry*, 33, 89-93.
- Paternoster, R., Bushway, S., Apel, R., & Brame, R. (2003). The effect of teenage employment on delinquency and problem behaviors. *Social Forces*, 82(1), 297-335.
- Paternoster, R., & Bushway, S. (2009). Desistance and the 'feared self': Toward an identity theory of criminal desistance. *Journal of Criminal Law & Criminology*, 99, 1103-1156.
- Paul, K. I., & Moser, K. (2009). Unemployment impairs mental health: Meta-analyses. *Journal of Vocational Behavior*, 74(3), 264-282.
- Paul, K. I., & Batinic, B. (2010). The need for work: Jahoda's latent functions of employment in a representative sample of the German population. *Journal of Organizational Behavior*, 31(1), 45-64.
- Pettit, B., & Lyons, C. J. (2009). Incarceration and the legitimate labor market: Examining age-graded effects on employment and wages. *Law & Society Review*, 43, 725-756.
- Piliavin, I., Thornton, C., Gartner, R., & Matsueda, R. L. (1986). Crime, deterrence, and rational choice. *American Economic Review*, 51, 101-119.
- Piquero, A. R., Brame, R., Mazerolle, P., & Haapanen, R. (2002). Crime in emerging adulthood. *Criminology*, 40(1), 137-169.
- Piquero, A. R., Farrington, D. P., Nagin, D. S., & Moffitt, T. E. (2010). Trajectories of offending and their relation to life failure in late middle age: Findings from the Cambridge Study in Delinquent Development. *Journal of Research in Crime and Delinquency*, 47, 151-173.
- Piquero, A. R., Jennings, W. G., & Farrington, D. (2013). The monetary costs of crime to middle adulthood: findings from the Cambridge study in delinquent development. *Journal of Research in Crime and Delinquency*, 50(1), 53-74.
- Pugliesi, K. (1995). Work and well-being – gender differences in the psychological consequences of employment. *Journal of Health and Social Behavior*, 36(1), 57-71.
- Pulkkinen, L., Nygren, H., & Kokko, K. (2002). Successful development: Childhood antecedents of adaptive psychosocial functioning in adulthood. *Journal of Adult Development*, 9(4), 251-265.
- Ramakers, A., Van Wilsem, J., & Apel, R. (2012). The effect of labour market absence on finding employment: A comparison between ex-prisoners and unemployed future prisoners. *European Journal of Criminology*, 9(4), 442-461.
- Raphael, S., & Winter-Ebmer, R. (2001). Identifying the effect of unemployment on crime. *Journal of Law & Economics*, 44(1), 259-283.
- Raphael, S. (2010). *Improving employment prospects for former prison inmates: challenges and policy*. National Bureau of Economic Research: Working Paper w15874.
- Raphael, S. (2014). The effects of conviction and incarceration on future employment outcomes. In D. P. Farrington & J. Murray (Eds.), *Labeling theory. Empirical tests. Advances in criminological theory*, Vol. 18 (pp. 237-262). New Brunswick/London: Transaction Publishers.
- Rauma, D., & Berk, R. A. (1987). Remuneration and recidivism: The long-term impact of unemployment compensation on ex-offenders. *Journal of Quantitative Criminology*, 3, 3-27.
- Roberts, J., & Horney, J. (2010). The life event calendar method in criminological research. In A. R. Piquero & D. Weisburd (Eds.), *Handbook of quantitative criminology* (pp. 289-312). New York: Springer.
- Rossi, A. S. (1998). Equality between the sexes: An immodest proposal. In K. A. Myers, C. D. Anderson & B. J. Risman (Eds.), *Feminist foundations: Toward transforming sociology* (pp. 31-70). Thousand Oaks, California: Sage.
- Ruhm, C. J. (1991). Are workers permanently scarred by job displacements? *American Economic Review*, 81, 319-324.

- Rutter, M., Quinton, D., & Hill, J. (1990). Adult outcomes of institution-reared children: Males and females compared. In L. N. Robins & M. Rutter (Eds.), *Straight and devious pathways from childhood to adulthood* (pp. 135-157). Cambridge: Cambridge University Press.
- Sainsbury, D. (1996). *Gender, equality, and welfare states*. New York: Cambridge University Press.
- Sampson, R. J., & Laub, J. H. (1990). Crime and deviance over the life course - the salience of adult social bonds. *American Sociological Review*, 55(5), 609-627.
- Sampson, R. J., & Laub, J. H. (1993). *Crime in the making: Pathways and turning points through life*. Cambridge, MA: Harvard University Press.
- Sampson, R. J., & Laub, J. H. (1997). A life-course theory of cumulative disadvantage and the stability of delinquency. In T. P. Thornberry (Ed.), *Developmental theories of crime and delinquency* (pp. 1-29). New Brunswick, N.J.: Transaction.
- Savage, J., Bennett, R. R., & Danner, M. (2008). Economic assistance and crime: A cross national investigation. *European Journal of Criminology*, 5, 217-238.
- Savolainen, J. (2000). Inequality, welfare state, and homicide: Further support for the institutional anomie theory. *Criminology*, 38, 1021-1042.
- Savolainen, J. (2009). Work, family and criminal desistance. Adult social bonds in a Nordic welfare state. *British Journal of Criminology*, 49(3), 285-304.
- Schochet, P. Z., Burghardt, J., & McConnell, S. (2008). Does Job Corps work? Impact findings from the National Job Corps Study. *American Economic Review*, 98(5), 1864-1886.
- Schoeni, R. F., & Ross, K. (2005). Material assistance from families during the transition to adulthood. In R. A. Settersten Jr., F. F. Furstenberg Jr., & R. G. Rumbaut (Eds.), *On the frontier of adulthood: Theory, research, and public policy* (pp. 396-416). Chicago: University of Chicago Press.
- Schwartz, R. D., & Skolnick, J.H. (1962). Two studies of legal stigma. *Social Problems*, 10, 133-142.
- Shover, N. (1996). *Great Pretenders: Pursuits and Careers of Persistent Thieves*. Boulder, CO: Westview Press.
- Skardhamar, T., & Savolainen, J. (2012). Does employment contribute to desistance? Offending trajectories of crime-prone men around the time of job entry. Discussion Papers No. 716. Statistics Norway, Research Department.
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87(3), 355-374.
- Staff, J., & Uggen, C. (2003). The fruits of good work: Early work experiences and adolescent deviance. *Journal of Research in Crime and Delinquency*, 40(3), 263-290.
- Statistics Netherlands (2000). *Standaardclassificatie misdrijven* [Standard classification offenses]. Available at <http://www.cbs.nl/nl-NL/menu/themas/veiligheid-recht/methoden/classificaties/standaardclassificatie-misdrijven-methode.htm>.
- Statistics Netherlands (2010). Employment participation. Retrieved from <http://statline.cbs.nl>, October 24, 2010.
- Statistics Netherlands (2012). Employment participation. Retrieved from <http://statline.cbs.nl>, December 12, 2012.
- Stevens, A. H. (1997). Persistent effects of job displacement: The importance of multiple job losses. *Journal of Labor Economics*, 15, 165-188.
- Tanner, J., Davies, S., & O'Grady, B. (1999). whatever happened to yesterday's rebels? Longitudinal effects of youth delinquency on education and employment. *Social Problems*, 46, 250-274.
- The Netherlands Institute for Social Research [Sociaal en Cultureel Planbureau] (2005). *Toekomst arbeidsmarkt en sociale zekerheid*. Den Haag.
- Thoits, P. A. (1986). Multiple identities: Examining gender and marital status differences in distress. *American Sociological Review*, 51, 259-272.
- Uggen, C., & Kruttschnitt, C. (1998). Crime in the breaking: Gender differences in desistance. *Law & Society Review*, 32(2), 339-366.
- Uggen, C. (1999). Ex-offenders and the conformist alternative: A job quality model of work and crime. *Social Problems*, 46(1), 127-151.

- Uggen, C. (2000). Work as a turning point in the life course of criminals: A duration model of age, employment, and recidivism. *American Sociological Review*, 65(4), 529-546.
- Uggen, C., & Wakefield, S. (2005). Young adults reentering the community from the criminal justice system: The challenge of becoming an adult. In D. W. Osgood, E. M. Foster, C. Flanagan, & G. R. Ruth (Eds.), *On your own without a net: The transition to adulthood for vulnerable populations* (pp. 114-144). Chicago: University of Chicago Press.
- Uggen, C., & Wakefield, S. (2008). What have we learned from longitudinal studies of work and crime? In A. M. Liberman (Ed.), *The long view of crime: A synthesis of longitudinal research* (pp. 191-219). New York: Springer.
- Valk, M. C., Roth, H., Haak, M., & Sam-Sin, X. (2006). *Evaluation of the issue of the certificate of good behavior for legal persons*. Amsterdam, the Netherlands: Bureau Voor Markt- en Beleidsonderzoek.
- Van den Berg, G. J., & Van Ours, J. C. (1994). Unemployment dynamics and duration dependence in France, the Netherlands and the United Kingdom. *Economic Journal*, 104, 432-43.
- Van der Geest, V. R., Blokland, A. A. J., & Bijleveld, C. C. J. H. (2009). Delinquent development in a sample of high-risk youth. Shape, content, and predictors of delinquent trajectories from age 12 to 32. *Journal of Research in Crime and Delinquency*, 46(2), 111-143.
- Van der Geest, V. R. (2011). *Working their way into adulthood. Delinquency and employment in high-risk boys to age 32* (Doctoral dissertation). Vrije Universiteit, Amsterdam.
- Van der Geest, V., Bijleveld, C. C. J. H., Blokland, A. A. J., & Nagin, D. S. (forthcoming). The effects of incarceration on longitudinal trajectories of employment: A follow up in high risk youth from ages 18 to 32.
- Van der Geest, V. R., Bijleveld, C. C. J. H., & Blokland, A. A. J. (2011). The effects of employment on longitudinal trajectories of offending: A follow-up of high-risk youth from 18 to 32 years of age. *Criminology*, 49(4), 1195-1234.
- Van der Geest, V., Bijleveld, C., & Verbruggen, J. (2013). Vallen en opstaan. Mannen en vrouwen 17 jaar na vertrek uit een justitiële jeugdinrichting. Amsterdam: Vrije Universiteit en Nederlands Studiecentrum Criminaliteit en Rechtshandhaving.
- Van der Heide, W., & Eggen, A. Th. J. (2003). *Criminaliteit en rechtshandhaving 2001 - ontwikkelingen en samenhangen. [Crime and law enforcement 2001 - trends and correlations]*. Den Haag: WODC.
- Van der Valk, J., & Boelens, A. (2004). Vrouwen op de arbeidsmarkt. *Sociaal-Economische Trends*, 3. Centraal Bureau voor de Statistiek.
- Van Koppen, M. V. (2013). *Pathways into organized crime. Criminal opportunities and adult-onset offending* (Doctoral dissertation). Vrije Universiteit, Amsterdam.
- Van Oorschot, W. (1998). From solidarity to selectivity: The reconstruction of the Dutch social security system 1980-2000. *Social Policy Review*, 7, 183-202.
- Van Ours, J. C. (2003). Has the Dutch miracle come to an end? *CentER Discussion Paper* No. 2003-32.
- Van Rosmalen, M.M., Kalidien, S. N., & De Heer-De Lange, N. E. (Eds.) (2012). *Criminaliteit en rechtshandhaving 2011. Ontwikkelingen en samenhangen*. CBS, WODC, Raad voor de Rechtspraak. Den Haag: Boom uitgevers.
- Van Tulder, F. (1985). Criminaliteit, pakkans en politie. Schattingen met een macromodel. Rijswijk: SCP, cahier 45.
- Verbruggen, J., Blokland, A. A. J., & Van der Geest, V. R. (2012). Effects of employment and unemployment on serious offending in a high-risk sample of men and women from ages 18 to 32 in the Netherlands. *British Journal of Criminology*, 52(5), 845-869.
- Verbruggen, J., Van der Geest, V. R., & Blokland, A. A. J. (2014). Educational level, employment, and crime: A longitudinal study of disadvantaged youths. In F. M. Weerman & C. C. J. H. Bijleveld (Eds.), *Criminal behaviour from school to the workplace: Untangling the complex relations between employment, education, and crime* (pp. 122-141). London/New York: Routledge.
- Verhulst, F. C., Van der Ende, J., Ferdinand, R. F., & Kasius, M. C. (1997). The prevalence of DSM-III-R diagnoses in a national sample of Dutch adolescents. *Archives of General Psychiatry*, 54(4), 329.

- Visser, C. A., Winterfield, L., & Coggeshall, M. B. (2005). Ex-offender employment programs and recidivism: A meta-analysis. *Journal of Experimental Criminology*, 1, 295-315.
- Wadsworth, T. (2006). The meaning of work: Conceptualizing the deterrent effect of employment on crime among young adults. *Sociological Perspectives*, 49(3), 343-368.
- Wartna, B.S.J., Kalidien, S.N., Tollenaar N., & Essers, A.A.M. (2006). *Strafrechtelijke recidive van jongeren uit justitiële jeugdinrichtingen*. Den Haag: Wetenschappelijk Onderzoek- en Documentatiecentrum.
- West, D. J., & Farrington, D. P. (1973). *Who becomes delinquent?* London: Heinemann.
- Western, B., & Beckett, K. (1999). How unregulated is the us labor market? The penal system as a labor market institution. *American Journal of Sociology*, 104, 1030-1060.
- Wiesner, M., Kim, H. K., & Capaldi, D. (2010). History of juvenile arrests and vocational career outcomes for at-risk young men. *Journal of Research in Crime and Delinquency*, 47, 91-117.
- Wijkman, M. D. S., Van der Geest, V. R., & Bijleveld, C.C.J.H. (2006). Delinquentie van op civielrechtelijke en strafrechtelijke titel behandelde jongeren [Delinquency after treatment in a juvenile justice institution under civil or criminal law]. *Tijdschrift voor Familie- en Jeugdrecht*, 1, 18-27.
- Willott, S., & Griffin, C. (1999). Building your own lifeboat: Working-class male offenders talk about economic crime. *British Journal of Social Psychology*, 38, 445-460.
- Wittebrood, K., Michon, J. A., & Ter Voert, M. J. (1997). *Nederlanders over criminaliteit en rechtshandhaving*. Leiden: Gouda Quint, Nederlands Studiecentrum Criminaliteit en Rechtshandhaving.
- Wolbers, M. H. J. (2000). The effects of level of education on mobility between employment and unemployment in the Netherlands. *European Sociological Review*, 16(2), 185-200.
- Work-Wise (2007). Het traject Work-Wise. Retrieved from [http://docs.minszw.nl/pdf/135/2008/135\\_2008\\_1\\_21995.pdf](http://docs.minszw.nl/pdf/135/2008/135_2008_1_21995.pdf), December 3, 2013.
- Worrall, J. L. (2005). Reconsidering the relationship between welfare spending and serious crime: A panel data analysis with implications for social support theory. *Justice Quarterly*, 22, 364-391.
- Worrall, J. L. (2009). Social support and homicide. *Homicide Studies*, 13, 124-143.
- Zoutewelle-Terovan, M., Van der Geest, V. R., Liefbroer, A., & Bijleveld, C. C. J. H. (2012). Criminality and family formation: Effects of marriage and parenthood on criminal behavior for men and women. *Crime and Delinquency*, DOI: 0.1177/0011128712441745.
- Zweig, J., Yahner, J., & Redcross, C. (2011). For whom does a transitional jobs program work? Examining the recidivism effects of the Center for Employment Opportunities program on former prisoners at high, medium, and low risk of reoffending. *Criminology & Public Policy*, 10(4), 945-972.



## SAMENVATTING (DUTCH SUMMARY)

### Jongeren met een instellingsverleden op weg naar volwassenheid

#### Een longitudinaal onderzoek naar werk en criminaliteit

Jaarlijks worden in Nederland meer dan 4.000 jongeren geïnstitutionaliseerd in een jeugdinrichting omdat er ernstige zorgen bestaan omtrent hun ontwikkeling, bijvoorbeeld omdat ze ernstig probleemgedrag vertonen en hun ouders niet in staat zijn voor hen te zorgen. Jongeren met een instellingsverleden worden gekenmerkt door een problematische achtergrond. Zo groeiden ze dikwijls op in een problematische gezinssituatie, hebben ze problemen op school, hebben ze last van psychische en gedragsproblemen, en maken ze zich dikwijls schuldig aan delinquentie. Vanwege deze problematische achtergrond hebben jongeren met een instellingsverleden een verhoogd risico om problemen te ondervinden wanneer ze de transitie naar volwassenheid maken. Met name hun uitgangspositie op de arbeidsmarkt is doorgaans slecht. Dit is ongunstig, omdat juist van werk wordt gedacht dat het kan bijdragen aan een niet-criminele levensstijl, en zo de ontwikkeling van een persistente criminele carrière kan helpen voorkomen.

Het is grotendeels onbekend hoe het jongeren met een instellingsverleden ver gaat op weg naar volwassenheid in het algemeen, en op het gebied van werk in het bijzonder. Dit proefschrift beoogt inzicht te geven in de ontwikkeling van en de relatie tussen de criminele carrière en arbeidscarrière van jongvolwassenen met een instellingsverleden. Het doel van dit proefschrift is drieledig, namelijk het onderzoeken van het effect van werk op criminaliteit (hoofdstuk 2 en 3), het onderzoeken van de effecten van veroordeling en detentie op werk-kansen (hoofdstuk 4), en het onderzoeken in hoeverre werk en criminaliteit maatschappelijke aanpassing in de volwassenheid beïnvloeden (hoofdstuk 5).



## DE 17UP STUDIE

Om te onderzoeken hoe transitie in de criminele carrière en arbeidscarrière elkaar beïnvloeden, en om te onderzoeken in hoeverre werk en criminaliteit invloed hebben op maatschappelijke aanpassing in de volwassenheid, worden data van de 17Up studie gebruikt. De onderzoeksgroep van de 17Up studie bestaat uit 540 jongens en meisjes die in de jaren 1990, toen ze gemiddeld 15 jaar oud waren, in een justitiële jeugdinrichting (JJI) verbleven om behandeld te worden voor ernstig probleemgedrag, waaronder vaak delinquentie.

Longitudinale gegevens over veroordelingen, detentie, werk en uitkeringen zijn verzameld tot 32-jarige leeftijd. Deze officieel geregistreerde informatie is aangevuld met zelfgerapporteerde gegevens over verschillende levensdomeinen die verzameld zijn via interviews met een deel van de oorspronkelijke onderzoeksgroep (N=251), toen deze mensen gemiddeld 35 jaar oud waren. Daarnaast is gebruikgemaakt van informatie over persoons- en achtergrondkenmerken die verzameld is door de behandeldossiers te raadplegen die aangelegd zijn tijdens het verblijf van de jongeren in de JJI.

Deze rijke dataset maakt het mogelijk om een groep Nederlandse jongens en meisjes met een instellingsverleden tot ver in de volwassenheid te volgen. Dit proefschrift bouwt daarom voort op bestaand onderzoek naar de werk-criminaliteit relatie, dat grotendeels in het buitenland is uitgevoerd, zich concentreert op jongens en/of mannen, en waarin mensen zelden voor een langere periode zijn gevolgd.

## EEN BESCHRIJVING VAN DE ONDERZOEKSGROEP

De verschillende empirische hoofdstukken laten zien dat een groot deel van de jongeren al voor het 18<sup>e</sup> jaar veroordeeld is voor een delict: 80 procent van de jongens en meer dan de helft van de meisjes wordt voor het 18<sup>e</sup> jaar veroordeeld, jongens worden gemiddeld ook vaker veroordeeld dan meisjes.

Een groot deel van de onderzoeksgroep wordt ook in de volwassenheid veroordeeld. Hoofdstuk 2, 3 en 4 tonen aan dat meer dan driekwart van de mannen en ruim 40 procent van de vrouwen op enig moment tijdens de observatieperiode, tussen 18 en 32 jaar, veroordeeld wordt voor een delict. Ook in de volwassenheid worden mannen gemiddeld vaker veroordeeld dan vrouwen. Bij zowel mannen als vrouwen neemt crimineel gedrag wel af naarmate ze ouder worden.

Hoewel het merendeel van de mannen en vrouwen werk heeft op enig moment tussen hun 18<sup>e</sup> en 32<sup>e</sup> jaar, blijkt dat 15 procent van de onderzoeksgroep chronisch werkloos is gedurende de gehele observatieperiode. Bovendien blijken de mannen en vrouwen die wel werken instabiele arbeidscarrières te hebben. Hun arbeidscarrières worden gekenmerkt door meerdere kortdurende banen en periodes van werkloosheid. Het is daarom niet opmerkelijk dat een groot deel van de jongvolwassenen met een instellingsverleden – vrouwen vaker dan mannen – op enig moment tijdens de observatieperiode een uitkering ontvangt.

Verder laten de resultaten van hoofdstuk 5 zien dat wanneer de mannen en vrouwen uit de onderzoeksgroep gemiddeld 35 jaar oud zijn, een groot deel van hen moeilijkheden ervaart in verschillende levensdomeinen. Niet alleen op het gebied van werk, maar ook op het gebied van fysieke gezondheid, psychische gezondheid en alcohol- en drugsgebruik blijkt de groep problemen te onderkennen. Een deel van de mannen en vrouwen is op het moment van de interviewstudie gedetineerd in een Penitentiaire Inrichting of een TBS-kliniek, of woont in een instelling voor verslavings- of psychiatrische problematiek. Voor sommige mannen en vrouwen herhaalt de geschiedenis zich en zijn de kinderen uit huis geplaatst omdat ze niet in staat geacht werden voor hun kinderen te kunnen zorgen. Mannen lijken zich in het algemeen minder gunstig te ontwikkelen in de volwassenheid dan vrouwen.

#### EFFECTEN VAN WERK OP CRIMINALITEIT

Het eerste doel van dit proefschrift is om te onderzoeken wat het effect is van werk op criminaliteit. Hoewel verschillende theorieën veronderstellen dat werk leidt tot een afname in crimineel gedrag, kan het ook zo zijn dat werk slechts samenhangt met minder criminaliteit omdat mensen die werk zoeken en vinden sowieso al meer geneigd zijn om crimineel gedrag achter zich te laten. Om dit te onderzoeken zijn in hoofdstuk 2 effecten van werk, werkduur en werkloosheidsduur op criminaliteit bestudeerd, en in hoofdstuk 3 effecten van werk en uitkeringen op criminaliteit.

Hoofdstuk 2 laat zien dat voor zowel mannen als vrouwen het hebben van werk samenhangt met een afname in het aantal veroordelingen. Daarnaast blijkt voor mannen dat, bovenop het effect van werk, langer aaneengesloten werken het aantal veroordelingen verder doet afnemen. Ten slotte laat hoofdstuk 2 zien dat een langere periode van werkloosheid voor vrouwen samenhangt met een toename in het aantal veroordelingen, terwijl het voor mannen juist samenhangt met een kleine afname in crimineel gedrag.

Net als hoofdstuk 2 laat hoofdstuk 3 zien dat werk samenhangt met een afname in crimineel gedrag voor zowel mannen als vrouwen. Daarnaast toont hoofdstuk 3 aan dat voor mannen ook het ontvangen van een uitkering samenhangt met een afname in criminaliteit. Voor vrouwen hangt het ontvangen van een uitkering, en specifiek het ontvangen van een uitkering wegens arbeidsongeschiktheid, echter samen met een toename in het aantal veroordelingen. In hoofdstuk 3 wordt verder onderscheid gemaakt tussen vermogens- en geweldscriminaliteit. Werk blijkt voor mannen en vrouwen de kans op zowel vermogens- als geweldscriminaliteit te verlagen. Het ontvangen van een uitkering echter, is alleen voor mannen geassocieerd met een verlaagde kans op vermogenscriminaliteit, terwijl het ontvangen van een uitkering voor mannen noch vrouwen gerelateerd is aan geweldscriminaliteit.

Samenvattend blijkt dat mannen en vrouwen die werk hebben een afname in hun criminele gedrag laten zien. De effecten van uitkeringen verschillen echter voor mannen en vrouwen. Het ontvangen van een uitkering hangt voor

mannen samen met een afname, en voor vrouwen met een toename in criminaliteit.

Wat betekenen deze resultaten voor theorieën over werk en criminaliteit? De bevindingen van hoofdstuk 2 en 3 ondersteunen theorieën die uitgaan van een causaal effect van werk op criminaliteit. In de analyses is namelijk rekening gehouden met zogenoemde selectie-effecten, wat betekent dat sommige mensen bepaalde kenmerken hebben die zowel de kans op criminaliteit als op werkloosheid vergroten. Het hebben van werk blijkt, bovenop deze selectie-effecten, bij te dragen aan een afname in criminaliteit. De resultaten ondersteunen zowel theorieën die stellen dat het inkomen dat men met werk verdient personen weerhoudt van het plegen van delicten, als theorieën die stellen dat andere, niet-financiële aspecten van werk kunnen bijdragen aan het stoppen met criminaliteit.

Allereerst zijn de resultaten in lijn met theorieën die stellen dat de financiële motivatie voor criminaliteit van belang is. Economische en *strain*-theorieën stellen dat werk bijdraagt aan het stoppen met criminaliteit omdat mensen die werken een inkomen ontvangen. Mannen en vrouwen plegen minder criminaliteit in de jaren dat ze werken en dus een inkomen verdienen, wat erop kan duiden dat het financiële aspect van werk belangrijk is. Ook de bevinding dat werk en het ontvangen van een uitkering een sterker effect hebben op vermogenscriminaliteit dan op geweldscriminaliteit ondersteunt het idee dat (een gebrek aan) inkomen een rol kan spelen bij criminaliteit. Echter, voor vrouwen lijkt het verband tussen het ontvangen van een inkomen en criminaliteit complexer, aangezien voor vrouwen het ontvangen van een arbeidsongeschiktheidsuitkering juist samenhangt met een toename in criminaliteit. Dit heeft mogelijk te maken met de psychische of psychiatrische problemen waarvan deze vrouwen dikwijls last lijken te hebben, die kunnen bijdragen aan crimineel gedrag en/of het stoppen met criminaliteit kunnen bemoeilijken. Daarnaast kan de relatie tussen inkomen en criminaliteit minder eenduidig zijn voor vrouwen dan voor mannen, omdat vrouwen vaker dan mannen, en vaak al op zeer jonge leeftijd, kinderen krijgen en er in de zorg voor de kinderen vaker alleen voor staan.

Hoewel het effect van werk op criminaliteit kan duiden op het belang van inkomen voor het stoppen met criminaliteit, kan het ook betekenen dat werk bijdraagt aan een afname in crimineel gedrag vanwege andere positieve veranderingen, zoals meer structuur en sociale controle die het hebben van werk met zich meebrengt. Hoofdstuk 3 toont aan dat werk een sterker effect heeft op criminaliteit dan het ontvangen van een uitkering, wat erop kan duiden dat de niet-financiële voordelen van werk kunnen bijdragen aan het stoppen met criminaliteit. Bovendien blijkt werk zowel vermogens- als geweldscriminaliteit te beïnvloeden. Aangezien geweldscriminaliteit doorgaans niet wordt gepleegd met een financieel doel, lijken deze resultaten dus te wijzen op het belang van de sociale controle die geassocieerd is met het hebben van werk bij het stoppen met criminaliteit.

Ook de bevinding uit hoofdstuk 2, dat bovenop het hebben van werk, een langere periode aaneengesloten werken het aantal veroordelingen verder verlaagt, wijst op het belang van de niet-financiële aspecten van werk. Ook dit

ondersteunt controletheorieën die stellen dat vooral een stabiele, goede baan de mogelijkheid biedt om binding aan de conventionele maatschappij te creëren en sociaal kapitaal op te bouwen, waardoor crimineel gedrag minder aantrekkelijk wordt. Naarmate iemand langer een baan heeft waar hij/zij tevreden mee is, zal diegene steeds minder bereid zijn deze baan op het spel te zetten door criminaliteit te plegen. Dit graduele effect van werk op criminaliteit is echter alleen gevonden voor mannen, wat er mogelijk op duidt dat het belang van werk verschilt voor mannen en vrouwen. Wellicht heeft dit te maken met het feit dat vrouwen vaker parttime werken en vaker werk combineren met andere sociale rollen zoals die van moeder.

Tenslotte toont hoofdstuk 2 aan dat langdurige werkloosheid gerelateerd is aan een toename in criminaliteit, althans voor vrouwen. Voor mannen blijft langdurige werkloosheid echter samen te hangen met een kleine afname in crimineel gedrag. Mogelijk hangt een langere periode van werkloosheid voor vrouwen samen met een toename in criminaliteit omdat deze situatie voor hen, vaker dan voor mannen, betekent dat ze financiële problemen ervaren, zeker wanneer ze de zorg voor kinderen hebben. Wellicht kan de kleine afname in crimineel gedrag bij langdurig werkloze mannen worden verklaard doordat langdurig werkloze mannen vaker dan langdurig werkloze vrouwen in een omgeving met veel sociale controle, zoals een instelling voor bijvoorbeeld verslavings- of psychiatrische problematiek, lijken te verblijven, waardoor ze minder mogelijkheden hebben om criminaliteit te plegen.

Op basis van de gevonden resultaten kan dan ook geconcludeerd worden dat, hoewel de arbeidsparticipatie in de onderzoeksgroep laag is, werk van groot belang is voor mensen met een instellingsverleden. Zowel de financiële voordelen als de sociale controle die het hebben van werk met zich meebrengt, kunnen helpen bij het stoppen met criminaliteit.

#### EFFECTEN VAN WERKLOOSHEID, VEROORDELING EN DETENTIE OP DE KANS OP WERK

Werk draagt bij aan het stoppen met criminaliteit. Jongvolwassenen met een instellingsverleden kunnen echter, vanwege hun kwetsbare achtergrond, problemen ondervinden bij de transitie naar de arbeidsmarkt, en lopen het risico om al vroeg werkloos te raken. Het meemaken van werkloosheid kan de kansen op de arbeidsmarkt verder verkleinen. Ook crimineel gedrag, en daaruit voortvloeiend een strafblad en eventueel detentie, kan een succesvolle transitie naar de arbeidsmarkt bemoeilijken. Zowel eerdere werkloosheid als criminaliteit kunnen dus de werkkansen van mensen met een instellingsverleden verkleinen. In lijn met het tweede doel van dit proefschrift is daarom in hoofdstuk 4 onderzocht wat de effecten zijn van werkloosheid, veroordeling en detentie op de werkkansen van jongvolwassen mannen en vrouwen met een instellingsverleden.

De resultaten van hoofdstuk 4 tonen aan dat voor mannen met name eerdere werkloosheid de kans op toekomstig werk verkleint. Wanneer rekening

gehouden wordt met eerdere werkloosheid, blijken veroordelingen en detentie de werkkansen niet verder te schaden. Naast werkloosheid op zich hangen verschillende kenmerken van een geschiedenis van werkloosheid, zoals vaker en langer werkloos zijn, eveneens samen met een verlaagde kans op werk.

Voor vrouwen blijkt echter wel dat veroordelingen de kans op werk verminderen, bovenop de nadelige effecten van eerdere werkloosheid. Naast eerdere veroordelingen hangen werkloosheid op zich en het aantal eerdere periodes van werkloosheid samen met een verlaagde kans op werk, terwijl een langere duur van werkloosheid de werkkansen van vrouwen niet verder verkleint. Net als voor mannen hangt voor vrouwen een geschiedenis van detentie niet samen met lagere werkkansen.

De bevindingen van hoofdstuk 4 wijzen op de schadelijke effecten van het meemaken van werkloosheid op de verdere arbeidscarrière en zijn daarmee in lijn met arbeidseconomische theorieën. De resultaten ondersteunen allereerst de *signaling*-theorie, die stelt dat een periode van werkloosheid een negatief signaal is voor een potentiële werkgever. Een werkgever kan werkloosheid, zeker wanneer iemand vaker of gedurende een lange periode werkloos is geweest, associëren met negatieve persoonlijke eigenschappen en zal daarom minder geneigd zijn om een persoon met een gat in zijn/haar CV aan te nemen.

Ten tweede zijn de resultaten in lijn met de *human capital*-theorie, die stelt dat men tijdens werkloosheid geen mogelijkheden heeft om te investeren in het eigen menselijk kapitaal (zoals arbeidsvaardigheden en kennis). Bovendien kunnen bestaande vaardigheden en kennis verdwijnen naarmate iemand langer werkloos is. Mensen met een instellingsverleden die werkloos zijn (geweest), zijn dus minder goede kandidaten voor een baan. Omdat met name voor mannen de duur van werkloosheid een negatief effect heeft op de werkkansen, lijkt het gebrek aan menselijk kapitaal vooral invloed te hebben op de werkkansen van mannen.

Kortom, het meemaken van werkloosheid bemoeilijkt de arbeidsmarktpositie van jongvolwassenen met een instellingsverleden. Crimineel gedrag blijkt, wanneer rekening wordt gehouden met de nadelige effecten van eerdere werkloosheid, alleen de werkkansen van vrouwen met een instellingsverleden te schaden. De bevindingen van hoofdstuk 4 ondersteunen dus alleen voor vrouwen de *labeling*-theorie, die stelt dat mensen die contact met politie en justitie hebben gehad worden gelabeld als deviant en daarom door potentiële werkgevers als ongeschikte werknemers worden beschouwd. Dit doet vermoeden dat crimineel gedrag meer stigmatiserend is voor vrouwen dan voor mannen. Aangezien minder vrouwen dan mannen zich schuldig maken aan criminaliteit, worden de vrouwen die crimineel gedrag vertonen mogelijk negatiever beoordeeld. Daarnaast kan het type banen waar vrouwen met een instellingsverleden naar solliciteren een rol spelen. Deze, vaak laaggeschoolde, vrouwen solliciteren waarschijnlijk met name naar laaggekwalificeerde banen in bijvoorbeeld winkels of in de horeca. Aangezien dit banen zijn waarin men veel met mensen en met geld moet werken, kunnen de negatieve eigenschappen die men aan iemand met een strafblad toedicht een reden zijn om vrouwen met een strafblad niet aan te nemen. Laaggeschoolde mannen werken vaker in branches

zoals de bouw, waar sommige negatieve eigenschappen die geassocieerd worden met een strafblad wellicht minder van belang zijn.

Het strafrechtelijk klimaat in Nederland, dat minder punitief is dan in bijvoorbeeld de Verenigde Staten, kan mogelijk verklaren waarom in deze studie naast eerdere werkloosheid een criminele geschiedenis weinig effect heeft op werkkansen, in tegenstelling tot in veel eerder buitenlands onderzoek. Zo kan een werkgever in Nederland alleen in bepaalde omstandigheden een strafblad opvragen, terwijl daar in bijvoorbeeld de Verenigde Staten meer mogelijkheden voor zijn. Daarnaast zijn gevangenisstraffen in Nederland relatief kort, waardoor er minder kans is dat men arbeidsvaardigheden verliest, en zijn straffen bovendien meer gericht op rehabilitatie. Hierdoor zijn een strafblad en detentie in Nederland wellicht minder schadelijk voor de arbeidscarrière dan in landen met een meer punitief strafrechtelijk klimaat.

Samenvattend kan worden gesteld dat de werkkansen van jongvolwassenen met een instellingsverleden met name worden verkleind door eerdere werkloosheid, en dat hun criminele gedrag de – al beperkte – werkkansen niet verder schaadt.

#### EFFECTEN VAN WERK EN CRIMINALITEIT OP MAATSCHAPPELIJKE AANPASSING

Het derde en laatste doel van dit proefschrift is na te gaan hoe het gaat met mensen met een instellingsverleden als ze gemiddeld 35 jaar oud zijn. In hoofdstuk 5 staat de maatschappelijke aanpassing van deze mannen en vrouwen centraal en wordt gekeken in hoeverre werk en criminaliteit de maatschappelijke aanpassing beïnvloeden. De maat voor maatschappelijke aanpassing geeft aan in hoeverre het 'goed' gaat met mensen op verschillende levensdomeinen, namelijk op het gebied van wonen, werken, relaties, kinderen, gezondheid, alcohol- en drugsgebruik en criminaliteit.

Zoals hierboven reeds beschreven is, ondervinden relatief veel mensen met een instellingsverleden in de volwassenheid problemen op meerdere levensdomeinen. Toch is het niet zo dat mensen met een problematische achtergrond per definitie tot ver in de volwassenheid moeilijkheden blijven ervaren. De resultaten van hoofdstuk 5 laten namelijk zien dat de meeste problematische persoons- en achtergrondkenmerken niet samenhangen met het niveau van maatschappelijke aanpassing in de volwassenheid. Daarnaast blijkt dat hoe meer men zich in de volwassenheid schuldig maakt aan crimineel gedrag, hoe meer problemen men op conventionele levensdomeinen ervaart. Daarentegen blijkt dat hoe langer mensen werken, des te beter de uitkomsten in de volwassenheid zijn.

Deze bevindingen zijn in tegenspraak met statische theorieën die ervan uitgaan dat sommige mensen vanwege bepaalde negatieve eigenschappen gedurende hun hele leven op verschillende gebieden problemen zullen ondervinden. De resultaten suggereren juist dat verandering in de levens van jongvolwassenen met een instellingsverleden mogelijk is, en ondersteunen daarmee levenslooptheorieën, die stellen dat gebeurtenissen in de volwassenheid van invloed



kunnen zijn op de levensloop. Zo kan een sterke binding met werk een positief effect hebben op de levensloop en transities in andere levensdomeinen faciliteren. Hoofdstuk 5 toont aan dat jongvolwassenen met een instellingsverleden die de transitie naar de arbeidsmarkt succesvol weten te maken een opwaartse spiraal in gang kunnen zetten, waardoor ook uitkomsten op andere levensdomeinen verbeteren.

De uitkomsten in de volwassenheid zijn echter slechter voor de mannen en vrouwen die hun criminele carrière voortzetten tot in de volwassenheid. Terwijl sterke bindingen aan werk een positieve verandering in de levensloop teweeg kunnen brengen, bemoeilijkt crimineel gedrag in de volwassenheid het maken van transities op conventionele levensdomeinen. Met de tijd lijkt het voor jongvolwassenen die zich schuldig maken aan criminaliteit steeds moeilijker te worden om hun toekomstperspectief te verbeteren. Mogelijk komen met name mannen hierdoor in een neerwaartse spiraal terecht, aangezien de uitkomsten in de volwassenheid slechter zijn voor mannen dan voor vrouwen.

Concluderend kan gesteld worden dat jongvolwassenen met een instellingsverleden dikwijls moeilijkheden op conventionele levensdomeinen ervaren. Het hebben van werk kan een belangrijke rol spelen in de levens van deze mannen en vrouwen, omdat het niet alleen bijdraagt aan het stoppen met criminaliteit, maar ook de perspectieven op andere levensloopdomeinen verbetert.

## CONCLUSIES EN IMPLICATIES

Dit proefschrift laat zien dat de weg naar volwassenheid voor jongvolwassenen met een instellingsverleden moeizaam kan zijn. De meerderheid van de onderzoeksgroep maakt zich in de volwassenheid schuldig aan crimineel gedrag, en een aanzienlijk deel van deze mannen en vrouwen ervaart moeilijkheden op de arbeidsmarkt. Sommigen hebben veel verschillende kortdurende banen en zijn meerdere malen werkloos. Anderen lijken de boot al vroeg in de volwassenheid te missen en werken in het geheel niet, mogelijk vanwege verslavings- of psychiatrische problematiek. Bovendien ervaren mensen met een instellingsverleden niet alleen moeilijkheden op het gebied van werk, maar hebben ze doorgaans ook problemen op verschillende andere domeinen, zoals op het gebied van relaties, de zorg voor hun kinderen, en gezondheid.

Hoewel mensen met een instellingsverleden problemen ondervinden op de arbeidsmarkt, blijkt werk wel van groot belang te zijn voor een succesvolle transitie naar de volwassenheid. De mannen en vrouwen die werk weten te vinden en dit werk ook weten te behouden, laten niet alleen een daling in hun criminele gedrag zien, maar verbeteren hiermee ook hun perspectieven op de arbeidsmarkt en op andere levensdomeinen. Het is voor jongeren die in een instelling verblijven dan ook van groot belang dat zij na hun verblijf een succesvolle transitie naar de arbeidsmarkt maken. Jongeren die in een instelling verblijven zijn daarom gebaat bij een intensieve begeleiding, niet alleen tijdens hun verblijf in een instelling, maar vooral ook in de periode erna. Deze ondersteuning moet niet alleen gericht zijn op het aan het werk helpen van deze



jongeren, maar vooral op het behouden van dat werk. De bevindingen van dit proefschrift wijzen dan ook op het belang van het investeren in nazorgtrajecten zoals Work-Wise, die er speciaal op gericht zijn het toekomstperspectief van jongeren die een instelling verlaten te verbeteren.



## DANKWOORD (ACKNOWLEDGEMENTS)

Dit proefschrift is het resultaat van vier jaar onderzoek dat ik aan het NSCR en de VU heb uitgevoerd. Vier jaren die voorbij zijn gevlogen, en die erg afwisselend, soms moeilijk, maar vooral ontzettend leuk en leerzaam zijn geweest. Ik wil een aantal mensen bedanken die belangrijk zijn geweest bij het tot stand komen van dit proefschrift.

Allereerst mijn (co)promotoren en mensen met wie ik heb samengewerkt. Victor, dank voor de relaxte manier van samenwerken. Het was heel fijn dat ik altijd bij je terecht kon met vragen en dat je altijd de tijd nam om met me mee te denken. Arjan, dank dat je de lat voor mij en dit proefschrift steeds hoog hebt gelegd. Ik heb veel geleerd van je grondige commentaar op mijn teksten. Wim, dank voor je blik op het grotere geheel en je hulp bij het vinden van de balans bij soms veel verschillende taken. Gerben, dank voor je kritische beoordeling van mijn stukken en voor alle mogelijkheden die het NSCR geboden heeft. Catrien, dank voor je enthousiasme en je vertrouwen van het begin af aan; ik kon altijd bij je terecht als dat nodig was. Bob, thank you for the great collaboration in putting together the income support article in Amsterdam and Newark. Ik hoop in de komende tijd met jullie allen nog aan veel mooie projecten te kunnen werken. Zowel aan het NSCR als aan de VU ben ik steeds door fijne collega's omringd geweest. Ik ben erg blij dat ik in zo'n open, gezellige en inspirerende omgeving heb gewerkt. Ik heb veel geleerd in de samenwerking met verschillende mensen, binnen de twee onderzoeksprojecten en in het geven van onderwijs. Ik wil daarom alle NSCR en VU collega's, en in het bijzonder de grote gezellige groep aio's, bedanken voor de fijne tijd. De borrels, pubquiz avonden, vele uurtjes XCO en de congressen hebben de afgelopen jaren tot een heel bijzondere tijd gemaakt.

Mijn speciale dank gaat uit naar de meiden met wie ik al die tijd zoveel heb kunnen delen, zowel op het gebied van het werk als daarbuiten. Sanne, roomie! Wat hebben we gelachen, liters koffie gedronken, geborreld, hard gewerkt en af en toe te veel gekletst. Heel erg bedankt voor je gezelligheid, je enthousiasme en de hard-werk-vibe, en dank dat je altijd de tijd nam om naar me te luisteren en met me mee te denken. Liza, dank voor al het gelach, de onzinnige en de serieuze gesprekken, onze hardlooppuurtjes, de yoga en jouw kijk op de dingen. Maud, dank voor al jouw humor, je adviezen, de series en muziek, en dank dat je altijd zo attent en betrokken bent.

Verder wil ik mijn familie bedanken voor hun voortdurende belangstelling voor waar ik mee bezig ben, en vooral mijn ouders, van wie ik de liefde voor kennis en wetenschap heb meegekregen en die mij in mijn studie en werk altijd gestimuleerd hebben. En ten slotte mijn lieve vriendinnen! Dank dat jullie altijd betrokken zijn geweest en dat jullie met veel gezelligheid voor de nodige afleiding naast het werk hebben gezorgd.

Dit proefschrift is gebaseerd op een uniek longitudinaal onderzoek: de 17Up studie. Zonder de medewerking van de volgende instanties en personen was dit onderzoek niet mogelijk geweest. Mijn dank gaat daarom uit naar Avenier (de voormalige Justitiële Jeugdinrichting Harreveld), de Dienst Justitiële Inrichtingen, in de persoon van Arie van den Hurk, het ministerie van Veiligheid en Justitie, in de persoon van Rinus Pitstra, en het ministerie van Sociale Zaken en Werkgelegenheid. Daarnaast wil ik de vele mensen bedanken die een bijdrage hebben geleverd aan het 17Up onderzoek, door het coördineren van de dataverzameling en het verzamelen en invoeren van data. Maar het belangrijkste zijn de respondenten die we, zo'n 15 jaar nadat ze in een jeugdinstelling verbleven, gevraagd hebben om met ons over hun ervaringen en hun levens te praten. Ik ben dankbaar dat zij hun verhaal met ons hebben gedeeld, ondanks dat het voor velen van hen vaak geen prettige herinneringen waren die ze moesten ophalen. Ik hoop dat dit proefschrift indirect kan bijdragen aan een betere toekomst voor jongeren die tegenwoordig in een instelling wonen.

## CURRICULUM VITAE

Janna Verbruggen (21-01-1985) attended VU University Amsterdam from 2003 to 2008. She obtained a BSc degree in Criminology, a BSc degree in Developmental Psychology, and an MSc degree in Life Course Criminology (cum laude). After working as a research assistant in the Department of Clinical Child and Family Studies of the Faculty of Psychology and Education at VU University, she started her PhD research in August 2009 at the Phoolan Devi Institute, a collaboration between VU University and the Netherlands Institute for the Study of Crime and Law Enforcement (NSCR). Subsequently, she worked as a lecturer and researcher in the Department of Criminal Law and Criminology of the Faculty of Law at VU University. She currently works as a lecturer and researcher in Criminology at the School of Social Sciences, Cardiff University in the United Kingdom.



## PUBLICATIONS

### *This dissertation*

- Verbruggen, J., Blokland, A. & Van der Geest, V. (2012). Effects of employment and unemployment on serious offending in a high-risk sample of men and women from ages 18 to 32 in the Netherlands. *British Journal of Criminology*, 52(5), 845-869. Doi: 10.1093/bjc/azs023.
- Verbruggen, J., Apel, R., Van der Geest, V. & Blokland, A. (submitted). Work, income support, and crime in the Dutch welfare state. A longitudinal study following vulnerable youths into adulthood.
- Verbruggen, J. (submitted). Effects of unemployment, conviction, and incarceration on employment. A longitudinal study on the employment prospects of disadvantaged youths.
- Verbruggen, J., Blokland, A. & Van der Geest, V. (submitted). Adult life adjustment of previously institutionalized youths. The relationship between criminal history, employment history, and adult life outcomes.

### *Other publications*

- Delft, I. van, Finkenauer, C. & Verbruggen, J. (submitted). Child maltreatment and social connectedness among high-risk females: links with depression.
- Hendriks, J., Slotboom, A. & Verbruggen, J. (2010). Zelfgerapporteerde seksuele dwang onder adolescenten. *Tijdschrift voor Seksuologie*, 34(1), 33-43.
- Slotboom, A. Hendriks, J. & Verbruggen, J. (2011). Contrasting adolescent female and male sexual aggression: A self-report study on prevalence and predictors of sexual aggression. *Journal of Sexual Aggression*, 17(1), 1-19.
- Van der Geest, V., Bijleveld, C. & Verbruggen, J. (2013). *Vallen en opstaan. Mannen en vrouwen 17 jaar na vertrek uit een justitiële jeugdinrichting*. Amsterdam: NSCR en Vrije Universiteit.
- Van der Geest, V., Skardhamar, T. & Verbruggen, J. (submitted). Changes in offending around official labor market entry: Vulnerable youths in transition to adulthood. *International Handbook of Criminal Careers and Life-Course Criminology*.
- Van Erp, J., Van der Geest, V., Huisman, W. & Verbruggen, J. (2011). Criminaliteit en werk. Een veelzijdig verband. *Tijdschrift voor Criminologie*, 53(2), 71-85.
- Verbruggen, J., Blokland, A. & Van der Geest, V. (2011). Werk, werkduur en criminaliteit. Effecten van werk en werkduur op criminaliteit in een hoogrisicogroep mannen en vrouwen van 18 tot 32 jaar. *Tijdschrift voor Criminologie*, 53(2), 116-139.
- Verbruggen, J., Van der Geest, V. R. & Blokland, A. A. J. (2014). Educational level, employment, and crime: A longitudinal study of disadvantaged youths. In F. M. Weerman & C. C. J. H. Bijleveld (Eds.), *Criminal behaviour from school to the workplace: Untangling the complex relations between employment, education, and crime* (pp. 122-141). London/New York: Routledge.



- Verbruggen, J. (2014). Appendix: Employment and the Dutch welfare state. In F. M. Weerman & C. C. J. H. Bijleveld (Eds.), *Criminal behaviour from school to the workplace: Untangling the complex relations between employment, education, and crime* (pp. 184-187). London/New York: Routledge.
- Verbruggen, J., Apel, R., Van der Geest, V. & Blokland, A. (2013). Werk, uitkeringen en criminaliteit. Kwetsbare jongeren gevolgd van 18 tot 32 jaar. *Mens & Maatschappij*, 88(3), 253-275.
- Weerman, F., Van der Geest, V., Verbruggen, J. & Blokland, A. (2014). Employment, education and crime: An introduction to a complex field of research. In F. M. Weerman & C. C. J. H. Bijleveld (Eds.), *Criminal behaviour from school to the workplace: Untangling the complex relations between employment, education, and crime* (pp. 1-22). London/New York: Routledge.