Advances in Life Course Research 28 (2016) 91–99

Contents lists available at ScienceDirect

Advances in Life Course Research

journal homepage: www.elsevier.com/locate/alcr

Offending and mortality

Steve van de Weijer [a,b,*], Catrien Bijleveld [a,b,c], Doreen Huschek [d]

[a] Netherlands Institute for the Study of Crime and Law Enforcement (NSCR), Amsterdam, Netherlands
[b] VU University, Amsterdam, Netherlands
[c] A-LAB Institute, Amsterdam, Netherlands
[d] University of Potsdam, Potsdam, Germany

ARTICLE INFO

Article history:
Received 24 April 2014
Received in revised form 9 November 2015
Accepted 24 November 2015
Available online 26 November 2015

Keywords:
Mortality
Offending
Mechanisms
Survival
The Netherlands

ABSTRACT

Background: Previous research has shown that offenders are at increased risk to die prematurely, but the etiology of this association is still unknown. Moreover, most previous studies use relatively short follow-up periods and do not take into account variation within the offender population with respect to frequency, timing and types of offenses.
Method: Using conviction data for a number of families at high-risk of offending born on average in 1932, we study mortality in both offenders and non-offenders, from a similar socio-economic background, until 2007.

We condition on life expectancy of the parents, age, gender, year of birth and marital status. We investigate associations between mortality and offending for different types of offenses: violent offenses, property offenses, weapons offenses, drugs offenses and driving under influence.
Results: In general, offending sample members were not significantly more likely to have died than non-offending sample members. Compared to the general population, however, both the offending and non-offending sample members were at increased risk to die. Sample members who were convicted for driving under the influence of alcohol or weapons offenses were at increased risk to die prematurely compared to non-offending sample members.
Conclusions: The relationship between offending in general and mortality is largely spurious.
Limitations: The use of official conviction data might have influenced the results.

1. Introduction

Empirical research from several countries has shown that criminal behavior and (premature) mortality are correlated. Drugs abusers (e.g. Bargagli, Sperati, Davoli, Forastiere, & Perucci, 2001; Hodgins, Larm, Molero-Samuleson, Tengström, & Larsson, 2009; Toumbourou et al., 2007), (former) prisoners (e.g. Binswanger et al., 2007; Coffey, Veit, Wolfe, Cini, & Patton, 2003; Dirkzwager, Nieuwbeerta, & Blokland, 2011; Kinner et al., 2011; Sailas et al., 2006) and offenders (e.g. Kjelsberg & Laake, 2010; Laub & Vaillant, 2000; Nieuwbeerta & Piquero, 2008; Piquero, Farrington, Shepherd, & Auty, 2014) have been shown to lead shorter lives than non-offenders. The etiology of this relationship, however, is still a matter open for investigation. Three mechanisms have been forwarded in the literature to explain the association between offending and (premature) mortality: a direct causal model, an indirect causal model and a spurious model.

First of all, offenders may be killed or wounded in the commission of a crime, for example by the police, victims who defend themselves or co-offenders (e.g. Cordeau, 1989). Moreover, drunk drivers may suffer an accident when they drive while under the influence of alcohol and drugs or criminals may take an overdose when using illicit drugs (e.g. Bargagli et al., 2001). These examples illustrate that the choice to offend implies entering into risky circumstances and behaviors and leads to a higher exposure to conflicts, with a lower life expectancy as a consequence. This we call the *direct causal model*: offenders die during or shortly after the commission of a crime as a direct consequence of the crime.

Second, offenders (especially chronic offenders) tend to live subcultural or marginal lives, in which alcohol and drug abuse are rife, to the detriment of the offender's health. This increases the risk of dying from ill health caused by excessive drugs and alcohol use among offenders. In addition, the commission of crimes and persistent criminal involvement may be viewed as a source of severe strain that may lead to negative psychological outcomes

* Corresponding author at: NSCR, PO Box 71304, 1008 BH Amsterdam, Netherlands. Tel.: +31 20 598 5239.
E-mail address: SvandeWeijer@nscr.nl (S. van de Weijer).

http://dx.doi.org/10.1016/j.alcr.2015.11.004
1040-2608/

and increase the risk of suicides (Tremblay & Paré, 2003). Moreover, several studies have shown that offenders are more likely to be victimized (e.g. Lauritsen, Sampson, & Laub, 1991; Singer, 1981), and possibly more likely to resist when victimized which creates additional hazard. These examples illustrate the *indirect causal model*: offenders do not die because they commit offenses but will die due to factors that are the consequence of their offending behavior.

Third, there may be factors that lead to criminal behavior and increase the risk of (early) death as well. Offenders may have certain personality characteristics, such as low self-control (Gottfredson & Hirschi, 1990) or low intelligence, that cause both offending and irresponsible risk taking with illnesses and accidents as possible consequences. Other hypotheses have been forwarded in the literature such as that mortality in offenders is attributable to poor self-care (bad hygiene, little exercise, smoking) as a consequence of dysfunctional upbringing, or economic and educational deprivation of offenders (Laub & Vaillant, 2000). This we call the *spurious model*: both offending and mortality risk are caused by confounding factors.

These three models are not necessary mutually exclusive. One could argue, for example, that excessive alcohol and drugs use is caused by a lack of self-control (spurious model), rather than being the consequence of a criminal lifestyle (indirect causal model). As drug use is illegal in most countries, an overdose could also be interpreted as a direct consequence of a crime (i.e. using drugs), as the direct causal model suggests. Multiple mechanisms might thus be at work.

These issues are important from a theoretical point of view. Issues of causality are at the heart of all criminological theory formulation, and the association between offending and mortality is such an association in which the causality would be hard to extract as offending is not imposed randomly. There is – if there was indeed such a causal relation – a clear policy relevance as well. If offending increases mortality risk, then crime may be framed as a public health problem as well: saving individuals from lives of crime would then also lead to healthier lives, fewer years of life lost, and possibly more productive, better socially integrated citizens.

The existing literature is inconclusive as to which mechanism best explains the increased mortality risk in offenders. One possible explanation for different conclusions regarding the possible mechanisms are the large cultural differences between countries. The risk to die violently and young is, for example, much greater for offenders from inner cities in the US than for offenders in most Western-European countries. Arguably, also the risk to die of a drug habit may differ per country and period, depending on whether clean needle policies are in operation, whether methadone is available and in general the availability of shelters, welfare and social security support for those living at the margins of society.

In addition, the (relatively) short follow-up period of most studies might influence conclusions about the etiology of the relationship between offending and mortality. If offenders (and controls) are not followed up far into adulthood, these studies focus mainly on unnatural causes of death such as accidents, suicides or homicides. Although some studies with short follow-up periods find effects on natural causes of death (e.g. diseases) as well, such deaths are relatively rare at young ages and have a low prevalence in these studies.

In this paper, we will investigate to what extent offenders indeed lead shorter lives than non-offenders, in the Netherlands. These offenders and non-offenders are on average born in 1932 and are followed up until 2007. They are born in a small number of families, implying that they share a similar inherited and environmental pool of possibly confounding factors. Moreover, the mechanisms behind the link between offending and mortality will be explored by testing different models that take into account the frequency and timing of offending and by examining effects of different types of crime.

2. Previous studies

Virtually all studies that focus on the association between criminal behavior and mortality find that offenders have a higher risk to die (prematurely) than non-offenders. Many of these studies focus on (former) prisoners in particular rather than offenders in general. We will discuss some of these studies, for a complete overview of all studies on imprisonment and mortality see Dirkzwager et al. (2011).

Coffey et al. (2003) studied a cohort of all adolescent offenders who received their first custodial sentence in the state of Victoria, Australia. This cohort was followed during a period of a little over 3 years for men and just under one and a half years for women. The crude mortality ratio for men was almost eightfold increased. The standardized mortality ratios for male prisoners were 25.7 for drug related deaths, 9.2 for suicide, and 5.7 for non-intentional injury. Kinner et al. (2011) studied a cohort of adult Australians released from prison for one year and found crude mortality ratios of approximately 9. Sailas et al. (2006), similarly comparing a young group of offenders sentenced to prison in Finland to the general population, found a standardized mortality ratio of 7.4 for young male prisoners. These men mainly died due to unnatural causes of death. Binswanger et al. (2007) studied all 30,237 inmates released from the Washington State Department of Corrections between July 1999 and December 2003 for a period of 1.9 years. The mortality rate among former prisoners was 3.5 times that of other state residents, while the mortality rate was even 12.7 times larger during the first two weeks after release. In the Netherlands, the effects of first-time imprisonment on postprison mortality were examined by studying 597 first-time prisoners from a representative group of Dutch offenders for 25 years (Dirkzwager et al., 2011). The former prisoners were three times more likely to die than people from the general population, but did not have a higher mortality risk than non-imprisoned offenders.

Other studies have investigated the link between criminal behavior, not necessarily followed by imprisonment, and mortality. Stattin and Romelsjo (1995) examined 7577 male Swedish conscripts until age 33. Early police contacts was a predictor of premature mortality, but this association could be explained by a small group of sample members who abused drugs and/or alcohol. Laub and Vaillant (2000) investigated mortality in the Glueck men, a sample of delinquent boys who had been followed up from reform school well into adulthood, matched with controls, until age 65. The delinquent boys were more likely to die from unnatural and natural causes of death than the non-delinquent controls were. Nieuwbeerta and Piquero (2008) studied offenders from the Criminal Careers and Life Course Study (CCLS) who were all convicted in 1977, in the Netherlands. Among the CCLS sample members, 17.1% of the male offenders and 15.6% of the female offenders had died in 2002, compared to 9.7 and 8.9% of the males and females in the general population. The total group of offenders, thus, had an almost two times higher risk to die. Piquero et al. (2014) examined the mortality risk among 411 males in the Cambridge Study in Delinquent Development (CSDD) who were followed into their late 50s. They showed that the offenders in the CSDD were significantly more likely to die than non-offenders: 13.4% of the offenders had died by the end of 2010 compared to 3.6% of the non-offenders. Finally, a birth cohort of all children born in Northern Finland in 1966 were followed until age 27 by Räsänen, Tiihonen, Isohanni, Moring, & Koiranen (1998). Registered crimes were shown to increase the mortality risk, especially when combined with mental disorders.