



Universiteit Leiden

DRUG-RELATED HOMICIDE IN EUROPE

Part 1: Research report

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1. Introduction

Illicit drugs are big business and drug markets continue to be a profitable area for criminal organizations operating within the EU (EMCDDA & EUROPOL, 2016). The impact of these drugs and drug markets goes beyond affecting those who are directly exposed to drugs in terms of health and social problems. In a wider sense, the issue is of serious concern in relation to the security situation in Europe and may deeply affect neighborhoods and local communities as drug use and drug markets can act as cross-cutting facilitators for all types of violence (EMCDDA & EUROPOL, 2016; UNODC 2014:71). This drug-related violence can inflict an extensive burden on societies (Thomson, 2017:1). Not surprisingly, this constitutes an important topic for policymakers and practitioners in many countries (Ajzenman et al., 2015).

One of the crimes within this wider category of drug-related violence is homicide, which is generally considered as one of the most serious of all crime (Smit et al., 2012:5). Homicides lead to high social costs due to loss of life, human suffering, feelings of insecurity, decreased community development, and erosion of human and social capital (Granath et al., 2011:10). Consequently, homicides are generally assigned substantial resources for criminal investigation and prosecution (ibid). Addressing the phenomenon of drug-related homicide is not only of importance given the severity of a homicide event and its high costs on society, but also because drug-related homicide can provide insights into wider drug-related violence. Homicide is internationally well recorded (Eisner, 2008) and one of the crimes most commonly studied by criminologists (Scherr & Langlade, 2014). As the dark figure of homicide is relatively low as compared to other violent crimes, homicide is oftentimes used as an indicator for violent crime in general. In a similar vein, drug-related homicide (DRH) has the potential to act as a valuable indicator or proxy of wider drug-related violent crime.

Monitoring DRH is thus not only relevant to address the need for a broader understanding of the ramifications of the drug market, but also in light of the importance of the issue for policymakers. Yet, in the category of drug-related crime, the phenomenon of DRH appears to be an important gap in terms of available data and knowledge. Whereas, as stated above, homicide in general is internationally well recorded, this appears to be less the case for the particular phenomenon of drug-related homicide. Development of DRH data collection is therefore necessary in order to improve our understanding of the nature and consequences of wider drug-related crime. More specifically, there is a need to identify suitable national and international data sources and/or proxies to increase our ability to monitor this phenomenon.

Objectives

Given the above outlined importance to monitor DRH on the European level, this project aims to be a first step towards an European-level DRH monitoring system. In that vein, this report's research objectives are:

1. To map existing data sources on homicide in European countries;
2. To estimate the extent of drug involvement in national homicides by European country;
3. To assess and discuss the obstacles where a drug-homicide relationship cannot be readily established;
4. To assess the practical implications for DRH monitoring on the European level.

Disposition of the report

This report is the first of two deliverables of this project on DRH. In addition to the above outlined objective to critically review DRH data sources, an additional objective has been to develop a

proposal for establishing long-term EU-level monitoring of DRH, including an implementation plan. Both main objectives have their own output; respectively a research report and a follow-up monitoring proposal. The report at hand constitutes a review of relevant data sources on DRH in 30 European countries.

The structure of this report is as follows. First, we will briefly discuss several key conceptual approaches to the relationship between alcohol and drugs on the one hand, and homicide events on the other. Next, Chapter 2 outlines the methodology of the study and elaborates on used definitions, the scope of the research, the applied methodology and selected data for this study. Chapter 3 presents the results of the analysis on three levels, in which (a) each country is first discussed separately, followed by (b) a EU-wide analysis and finally (c) an international comparison between regions/clusters of countries. The analyses comprise of an identification of available data sources, an outline of characteristics of these data sources, and a brief overview of what these sources tell us about DRH. Chapter 4 reflects on these findings and identifies suitable proxy measures for DRH. Finally, Chapter 5 draws conclusions and provides a bridge to the follow-up of this report.

Background: The drug-violence relationship

There is an increasing body of literature on the relationship between psychoactive substances and violence, proposing various mechanisms that serve to conceptualize this nexus. A large part of this scholarly work is devoted to the use of alcohol. A smaller, but growing, number of studies focuses on the drug-violence relationship. Both niches have not yet fully grasped the full extent and complexity of the relationship between psychoactive substances and the use of violence (Brownstein et al., 2012). The body of literature on psychoactive substances in general illustrates that there is no clear understanding on what causal mechanisms are at play, the direction of causation, or whether there is a causal relationship at all. Especially in the field of drug-related crime, robust empirical findings supporting a causal relationship between drugs and violent behavior are scarce (Resignato, 2010).

Still, the existence of a relationship between violence and drugs and markets has been well established in the literature (e.g. see Brownstein et al., 2000 for an overview). In 1985, Goldstein developed a conceptual framework to describe and explain this relationship between drugs and violence. To date, this framework remains an influential contribution to the field of study on drug-related crime. This framework consist of three non-mutual exclusive mechanisms on the drug-violence nexus: psychopharmacological violence, economic-compulsive violence, and systemic violence.

Psychopharmacological violence

The first element of Goldstein's tripartite model is psychopharmacological violence. This model views the relationship between drugs and violence as a direct relation in which the violent crime involves drug use by those involved. This type of violence thus stems from the properties of the drugs itself. The psychopharmacological model suggests that "some individuals, as a result of short or long term ingestion of specific substances, may become excitable, irrational, and may exhibit violent behaviour" (Goldstein, 1985:494). Some substances, such as cocaine, amphetamines, and benzodiazepines, have indeed been found to increase aggressive and violent behavior (Centre for Public Health, 2006:5). Part of the equation is that "certain drugs (...) act on specific areas of the nervous system, including the frontal lobe and the limbic system, where the centres of aggressiveness and impulsiveness are located" (Brochu, 2001). In practice, the psychopharmacological effects of drugs on crime are also likely to be influenced by contextual factors, which can create a stage in which intoxication can lead to violence (Parker & Auerhahn, 1998:306; Bennet & Holloway, 2005). In addition to an intoxicated offender, psychopharmacological violence may also involve drug use by

the victim, as the use of drugs may also alter a person's behavior in such a way that it contributes that person's violent victimization (Goldstein 1985).¹

Economic-compulsive violence

Economic-compulsive violence is violence associated with the high costs of illicit drug use. The model suggests an indirect relation between drugs and violence, and asserts that some drug users engage in economically oriented violent crime in order to support costly drug use (Goldstein, 1985:496). The primary motivation to commit a violent crime is thus to steal drugs or means to obtain drugs (e.g. money or goods to fence). This type of economic-compulsive violence especially seems to occur in cases of addiction to more expensive drugs typified by compulsive patterns of use, such as cocaine and heroin (Bennet et al., 2008; Goldstein, 1985). Still, a considerable body of literature indicates that most heroin and opiate users tend to avoid resorting to violence when non-violent alternatives exist to acquire money or drugs. Others, however, do engage in violent acquisitive crimes such as robbery, assault or homicide.

Systemic violence

The third element in Goldstein's framework is systemic violence. The systemic model conceptually differs from the previous two models in the sense that it does not directly attribute the violence to the perpetrator's dependence on drugs for his or her own use. Rather, "systemic violence refers to the traditionally aggressive patterns of interaction within the system of drug distribution and use" (Goldstein, 1985:497). In other words, violence is a product of the structure of the illicit goods market and hence intrinsic to the very involvement with illicit substances (Inciardi, 1999:65). Examples of systemic violence include turf wars, rip deals and retaliation. The latter are violent responses to normative violations within the drug market, such as failure to pay debts or becoming an informant to the police. This type of violence is however not equally apparent in all types of illicit drug markets. For instance, competitive or transactional disputes do generally not spark much violence in the case of marijuana (Reuter, 2009). In contrast, the retailing of crack in the US in the 1980s and drug trafficking of cocaine and heroin in Mexico has triggered far higher levels of violence (ibid). Furthermore, the relationship between violence and drug markets is not linear. High-volume drug trafficking and undisturbed markets may coincide with lower levels of violence. This situation may change when the balance of power shifts or when competition increases (Lappi-Seppälä & Lehti, 2014).

¹ It is noteworthy to mention that literature suggests that the substance that has the strongest association with psychopharmacological violence is not in fact illicit drugs, but alcohol (Goldstein 1985; Brochu, 2001; Martin et al. 2004; McClelland & Teplin, 2001).

2. Methodology

This chapter will expand on the study's adopted methodology. First, the term 'drug-related homicide' will be defined. The second paragraph will clarify the study's scope, which is followed by an outline of the adopted research method. Finally, this chapter will address some limitations and disclaimers that should be kept in mind when interpreting the study's results.

Definitions

On the national level, countries often define homicide by a selection of articles from the national criminal code (Smit et al., 2012). This does not only mean that national definitions can thus be very country-specific, but also that these definitions tend to be phrased in legal terms (e.g. murder and manslaughter) rather than as the overarching social phenomenon of homicide. As this study focuses on the latter, it requires a definition of homicide more suitable in an international context. On this international level, similar to the national level, different agencies use different definitions of the term homicide. Yet these definitions are all related and contain the same elements: an offender, a killed person, and the offender's intention to kill that person (Smit et al., 2012:8). The unlawfulness of this killing is implicit in most international definitions, while some definitions mention this explicitly. Drawing from these international definitions, the term 'homicide', as adopted in this study, refers to the unlawful death purposefully inflicted on a person by another person (UNODC, 2014).

Finally, with those two definitions in mind, a homicide is considered a 'drug-related homicide' when the homicide emerges in the context of psychopharmacological violence, economic-compulsive violence or systemic violence as outlined in the previous chapter. Thus, a homicide is drug-related when (1) the homicide is the result of drug use by the perpetrator, the victim, or both, (2) when the homicide is motivated by a need to obtain drugs or money to buy drugs, or (3) when the homicide is related to the ecology of the drug market. In this context, drugs is defined as narcotics (heroin, morphine, etc.), stimulants (cocaine, amphetamine, etc.), hallucinogens (ecstasy, hashish, etc.), and excessive use of legally prescribed drugs (i.e. more than prescribed). The definition of drug-related homicide, as adopted in this study, thus excludes violence related to intoxication by alcohol.

Scope of the research

This study has been conducted for the EMCDDA. Therefore, the geographical scope of this project is limited to the EMCDDA reporting countries. These include the 28 EU Member States², as well as Norway and Turkey. Within this geographical scope, the unit of analysis is threefold. The first type of analysis will focus on sources on the national level, in which each of the 30 countries is analyzed separately. Secondly, a review has been conducted on international data sources. This includes an assessment of both sources on regions (clusters of countries) and sources on the Europe as a whole. The data that has been collected and analyzed on these three levels covers the period between 2000 and 2015.

Method and data

Method, sources and operationalization

The principal aim of this study is to identify suitable data sources on DRH, and to assess the strengths and weaknesses of these sources in terms of EU-level monitoring potential. Against this

² Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

backdrop, a critical review of relevant existing homicide sources has been conducted, both on the national and international level. Relevant sources in this regard are open and (semi-)closed homicide data sets that report on key homicide features and circumstances.

These sources are analysed on the basis of data on homicide in general and data on drug-related homicide (as defined above) specifically. With regards to the latter, this does provide certain challenges. Goldstein's psychopharmacological model suggests causality between intoxication and homicide. Yet this causality is extremely difficult to determine on a case by case basis and this type of information cannot be extracted from any of the reviewed open and semi-closed data sources on homicide. Therefore, to measure psychopharmacological violence, this study will look at data on number of perpetrators and victims that were drug abusers and the number of perpetrators and victims that were under the influence of drugs during the homicide. Although this data does not directly indicate causality, it does provide insight on the involvement of drug use in homicide, and serves as an indicator for psychopharmacological violence. With regards to economic-compulsive violence, data sources are reviewed for figures on homicide cases committed to gain drugs or money to buy drugs. Finally, in the case of systemic violence, data is collected that is either defined as such, or that provides insight on the perpetrator-victim relationship. In case both involved parties are drug users or drug dealers, these are strong indicators that the homicide was related to the drug market.³

Data collection strategy

Data collection took place between January 2017 and June 2017. All data was gathered from open and (semi-)closed sources. Examples of open sources are cause-of-death registers, crime and justice databases and reports, and statistical reports that focus on homicide or violent crimes in particular (e.g. the annual reports on murder published by the Norwegian Police). Examples of (semi-)closed sources are the homicide monitoring systems of the Netherlands (the Dutch Homicide Monitor) and Finland (the Finish Homicide Monitoring System). Three data collection approaches were adopted to identify these and other relevant homicide data sources and literature. The first approach concerns 'snowballing'. Although often used in the context of sampling, the principle of snowballing can also be applied to data collection. Snowballing is a technique for collecting data through the identification of an initial source, which is used to lead to other sources. For this study, several key publications served as an initial source to identify other sources, most notably the *Handbook of European Homicide Research* by Liem and Pridemore (2012).

Second, a systematic process of data collection was adopted to identify relevant online homicide data sources and literature. This involved a two-step approach. The first step served to identify homicide data sources, whereas step two aimed to assess these sources' relevancy for this study (i.e. whether the source reported on key homicide features and circumstances, specifically the relationship with drugs). Regarding step one, search engines such as Google, GoogleScholar, the Leiden University Library and the Wiley Online Library were used to identify data sources and literature on homicide. Used keywords include 'crime statistics', 'police statistics', 'cause-of-death statistics', 'mortality statistics', 'homicide rate', 'homicide count', 'homicide statistics', 'drug-related crime', 'drug violence', 'drug-related homicide', 'drugs AND homicide' and 'homicide database'. These keywords have been used in conjunction with the names of each of the 30 countries, with the names of regions within the EU, and with the EU-wide terminology (EU, Europe). Findings resulting from this approach, such as databases and statistical bulletins, were scanned on relevancy by searching within these sources on keywords such as 'homicide', 'manslaughter', 'murder', 'drug', 'substance', 'illicit', 'influence' and 'intoxication'. Initial searches for data sources were conducted by using (the above) English keywords. When this resulted in little or no findings for a specific country, follow-up searches were conducted in the native language(s) of that specific country. Searches on literature were conducted in English only (with the exception of data collection through snowballing, as

³ Although this is not the case per se.

mentioned above). These searches for literature resulted in over 100 empirical studies on homicide. Among those studies, only a hand full focused on the drug-violence relationship within either a European country, a cluster of European countries, or the EU or Europe as a whole.

After collecting homicide and DRH data based on the previous two approaches, professionals in the field of homicide and national entities responsible for preparing statistical data were contacted to check whether all relevant data sources had been identified, and, should this not be the case, to identify additional sources to address gaps. A list of contact persons and organizations is provided in appendix A.

Limitations and disclaimers

Definitions and data compilation

European countries differ in what they consider to be a homicide event, and thus adopt different definitions. Consequently, some countries might consider acts that do not constitute a prototypical homicide (e.g. euthanasia or assisted suicide) as a homicide event. Furthermore, institutions may differ in how they compile homicide data. Homicide statistics can for instance focus on the events, the victims and/or the perpetrators (Smit et al. 2012:5). Even when this focus is similar between countries, data can still vary in terms of input statistics (e.g. a homicide is registered as soon as authorities take notice) or output statistics (e.g. a homicide is registered after police investigation) (Smit et al. 2012:20). The homicide count can be expected to be higher in case of the former. For these various reasons, countries oftentimes do not produce comparable homicide data. This is important to note, as the analyses presented in the next chapter can thus not at all times be compared one-on-one.

Dark numbers

As indicated in the introduction, homicide constitutes a crime with relatively few unrecorded cases. Determining the occurrence of a homicide event is relatively easy compared to other interpersonal violence. Still, cases can be missed when the victim's body is not found or when autopsy of a found body does not lead to any reason to suspect that the person was victim of a homicide (Granath et al. 2011:36). These dark figures affect homicide data and accuracy. Furthermore, when measuring homicide it can be difficult to disentangle the possible role of drugs, potentially leaving this relation unregistered (false negative). False negatives or false positives can also occur as not all countries have a clear definition of being under influence of drugs. Furthermore, drug-related homicide statistics are not always being subjected to the same level of quality assurance as other variables (ONS, 2016:15 ;K. Grohmannová, personal communication, 6 June 2017). These issues should be kept in mind when interpreting the below presented analyses on the homicide rates and the extent of drug involvement in national homicides.

Language

As stated above, the search strategy for data sources included a multilingual approach. In contrast, the review of research literature has predominantly focused on English studies, with the exception of several non-English studies resulting from snowballing. Therefore, the findings – especially in terms of research literature– might not be exhaustive.

3. National data sources

Overview

This section will provide an overview of national data sources on homicide. All countries prepare homicide data by means of statistics on crime and justice and cause-of-death.⁴ Some countries also publish crime reports specifically on homicide or violent crime. Table 1 reflects the types of sources for homicide statistics per country. The Table also maps to what extent these sources contain data on drug-related homicide, specifically.

Table 1: Overview of national data sources

Country	OPEN SOURCE DATA						CLOSED/SEMI-CLOSED SOURCE DATA			
	Homicide statistics			Drug-related homicide			Homicide monitor system	Drug-related homicide		
	Cause of Death	Crime, Justice	Homicide specific ⁵	I	II	III		I	II	III
Austria										
Belgium										
Bulgaria										
Croatia										
Cyprus										
Czech Republic										
Denmark										
Estonia										
Finland										
France										
Germany										
Greece										
Hungary										
Ireland										
Italy										
Latvia										
Lithuania										
Luxembourg										
Malta										
Netherlands										
Norway										
Poland										
Portugal										
Romania										
Slovakia										
Slovenia										
Spain										
Sweden										
Turkey										
UK	Eng & Wa									
	Scotland									
	N. Ireland									

Note that there is some degree of overlap, as the open source homicide specific reports from England and Wales, Scotland and Norway are based on data from the respective national homicide monitoring systems.

- I Psychopharmacological violence
- II Economic-compulsive violence
- III systemic violence

⁴ Note that it is not always possible to extract homicide data from publicly available, published statistics. For several countries, obtaining these homicide statistics requires a query for information.

⁵ Referring to data sources which are focused specifically on homicide or violent crimes including homicide. These sources can contain descriptive and/or statistical data on multiple variables (e.g. perpetrator characteristics, victim characteristics, modus operandi, etc.). These homicide sources are usually crime or justice statistics (albeit more detailed), but this is not necessarily to case.

Country analyses

Austria

The main data sources on homicide in Austria are cause-of-death statistics and crime statistics. Cause-of-death statistics are prepared by Statistics Austria. These statistics are coded in accordance with the International Classification of Diseases (ICD-10, see annex B for an overview). The statistical office annually publishes a report on health statistics (*Jahrbuch der Gesundheitsstatistik*, see Statistics Austria, n.d.) which contains data on an ICD shortlist. This list includes deaths caused by homicide/assault (*Mord, tätlicher Angriff*). Crime statistics are recorded by the police and are annually published by the Ministry of Interior (the *Kriminalitätsbericht* and *Sicherheitsbericht*, see Bundesministerium für Inneres, n.d.). These publications contain data on murder (*Mord*), manslaughter (*Totschlag*), killing on request (*Tötung auf Verlangen*), infanticide at birth (*Tötung eines Kindes bei der Geburt*), and negligent homicide (*fahrlässige Tötung*). The department within the Ministry of Interior responsible for preparing and publishing these statistics has no statistical data on drug-related homicide available (A. Zehner, personal communication, 9 March 2017). Also the cause-of-death statistics do not address the extent in which drugs played a role in homicide.⁶

In terms of research literature, homicide in Austria has gained little scholarly attention. Studies have been conducted on child homicide (Putkonen et al., 2009a; 2011) and the link between firearm availability and suicide and homicide (Nestor et al., 2007). These studies, however, provide no additional insights into drug-related homicide in Austria.

Belgium

The Belgian Federal Public Service Economy annually publishes cause-of-death statistics, which provide information on the number of deaths caused by assault (*geweldpleging*) (Federal Public Service Economy, n.d.). Crime and justice statistics on homicide are prepared and published by the Federal Police (Federal Police, n.d.) and the Federal Public Service Justice (Federal Public Service Justice, n.d.). Police statistics contain the number of homicides as recorded by the Federal and local police. Justice statistics annually provide data on new criminal cases, criminal cases in progress, and closed criminal cases. Both contain data on murder (*moord, meurtre*) and manslaughter (*doodslag, assassinat*). However, none of these publicly accessible sources on homicide in Belgium document on DRH.

The body of literature on homicide in Belgium is rather small and mainly focuses on a pre-2000 timeframe (e.g. see Rousseaux et al., 2009; Thijssen & De Ruiter, 2010). So-far, the topic of drug-related homicide in Belgium has not received scholarly attention.

Bulgaria

The Bulgarian National Statistical Institute (*Национален статистически институт*) publishes cause-of-death statistics, including figures on death by homicide/assault, in the annual Health Services report (e.g. see National Statistical Institute Bulgaria, 2016). The main and most reliable source on (conventional) crime in Bulgaria is the police database (Margaritova-Vuchkova, 2014:120). This police data is presented in Bulgaria's *Statistical yearbook*, *Statistical reference book*, and *Crimes and persons convicted* report, also published annually by the National Statistical Institute (National Statistical Institute Bulgaria, n.d.). The data on homicide in these reports is both overlapping and complementary. None of these sources however address the relationship between homicide and

⁶ Note that cause-of-death statistics in accordance to the ICD register cases in which a person's death is attributable to this person's use of drugs. As such, the ICD list contains categories on deaths caused by drug use (e.g. overdose) and homicide by means of drugs (as modus operandi). The latter does provide insight in the association between drugs and homicide, but this type of data does not fall within Goldstein's tripartite framework as adopted in this study. Therefore, this type of homicide data will not be further addressed.

drugs. Such statistics appear to be non-existent in the case of Bulgaria (A. Tetevenska, personal communication, 14 February 2017). There also appears to be no research literature that addresses the issue of drug-related homicide.

Croatia

In Croatia, cause-of-death statistics are published by the Croatian Institute of Public Health (IPH). The annual number of deaths caused by homicide/assault are presented in the Croatian Health Statistics Yearbook (e.g. see IPH, 2016). Crime and justice statistics are prepared (though not always published) by a number of different institutions, including the Croatian Bureau of Statistics (*Državni Zavod za Statistiku*), the State Prosecutor's Office, courts, the Ministry of Justice, and the Ministry of Interior (e.g. see Getoš Kalac & Karlović, 2014:160). The latter annually publishes a *Survey of basic safety indicators*, as well as a periodical *Overview of basic indicators for public safety* (RH MUP, n.d.). The latter reports present crime statistics over ten subsequent years, and include separate data on murder, attempted murder, aggravated murder, attempted aggravated murder, manslaughter, infanticide, killing on request and negligent homicide. Drug-related homicide statistics are not registered by the police and hence not part of these publications (anonymous police employee, personal communication, 15 February 2017). The only type of offence committed under the influence of drugs which is systematically monitored by the Croatian government are traffic accidents (Croatian Office for Combatting Drugs Abuse, 2011:91).

In terms of research literature, academic contributions on homicide in Croatia are limited. Within this niche, especially homicide-suicide is addressed. For instance, Marcikić et al. (2002) systematically collected data on all combined homicide-suicide events that occurred over a 15-year period (1987–2001) in the Osijek County, and Morana et al. (2012) studied the occurrence and characteristics of homicide-suicide events in Southwestern Croatia from 1986–2009. This body of literature on homicide in Croatia does, however, not address the phenomenon of DRH.

Cyprus

Statistics on homicide in Cyprus are published by the Ministry of Health, the Statistical Service (*Στατιστική Υπηρεσία*, part of the Ministry of Finance), and the police. The former is responsible for cause-of-death statistics. These are based on death certificates which are coded in accordance with the ICD. Cause-of-death data is prepared by the Health Monitoring Unit and contains statistics on deaths caused by homicide/assault (e.g. see Ministry of Health Cyprus, n.d.; 2014).

The Statistical Service annually publishes a bilingual report on 'criminal statistics'. This report contains statistics on reported offenses, detected and undetected offenses, offenses under investigation, convictions, the number of victims, age and gender of the victims, the number of offenders, and the type of weapon used. All these statistics are specified by type of offense, including a combined category on premeditated murder, homicide, killing on provocation, and infanticide. Until 2012, the police statistics for the annual Criminal Statistics report were collected via paper questionnaires which were filled in by the Police Headquarters. Since 2012, data for the reports is drawn from an electronic file, which is provided by the Cyprus Police. This file contains no data on drug-related homicide (G. Ioannou, personal communication, 28 February 2017). Since 2012, crime statistics are also published by the Cyprus Police's newly created Analysis and Statistics Office (see Cyprus Police, n.d.). One of the office's areas of focus is serious crime, on which it published statistics from the year 2010 and onwards. These statistics include annual figures on murder and attempted murder, but no data on the extent in which drugs played a role in these crimes.

Research literature does not provide for additional insights. Literature on homicide – and crime in general – in Cyprus is scarce, and no known studies address the issue of DRH.

Czech Republic

The Czech Statistical Office (*Český statistický úřad*) annually publishes a bilingual⁷ statistical yearbook including cause-of-death and crime and justice statistics (e.g. see Czech Statistical Office, n.d.-a). Cause-of-death statistics are categorised following the ICD chapters, although the presented data in the yearbook omits the ICD chapter on external causes of death. Data on this chapter can be found via the CZSO public database, although this data is – with the exception of a figure on intentional self-harm – limited to the total figure on external mortality causes (Czech Statistical Office, n.d.-b).

Crime and justice statistics, also published in the statistical yearbook, are provided by respectively the Czech Police Presidium and the Ministry of Justice. The yearbook includes data on the number of reported crimes, cleared-up crimes, and convicted persons. These statistics are presented by type of offense, including murder. Again, additional data can be found via the CZSO public database. This includes data on murders being committed under the influence of alcohol (*pod vlivem alkoholu*). The CZSO however has no such figures available on murders committed under the influence of drugs (K. Kořenková, personal communication, 12 February 2017). However, data on DRH is collected by the National Monitoring Centre for Drugs and Addiction. Although this data (see Table 2) is not published, it can be obtained upon request. Additional data on the specific substances can be obtained by sending a query to the police. It should be noted that the used definition of ‘under influence’ is not entirely clear (K. Grohmannová, personal communication, 06-06-2017).

Table 2: Drug-related homicide in the Czech Republic (K. Grohmannová, personal communication, 06-06-2017)

Year	Murder cases total	Clarified		
		Clarified total	Of which: under influence	Of which: under influence of drugs
2005	186	161	45	4
2006	231	196	63	2
2007	196	174	46	2
2008	202	174	70	5
2009	181	157	49	8
2010	173	156	60	4
2011	173	148	53	8
2012	188	175	59	4
2013	182	165	57	3
2014	160	135	51	3
2015	155	135	51	3

In terms of research literature, homicide in the Czech Republic specifically has not sparked academic interest. As such, research literature does not provide insights into drug-related homicide in the Czech Republic. Instead, homicide in the Czech Republic has been studied in a number of international comparative studies (see next chapter).

Denmark

Statistics Denmark (*Danmarks Statistik*) publishes statistics on causes of death, crime and justice. These statistics can be found via the online interactive database (StatBank Denmark), in the annual statistical yearbook and in several other periodic publications by the statistical office (e.g. see Statistics Denmark, 2016; n.d.-a; n.d.-b). Data for on cause-of-death statistics stems from the Central Population Register (CPR) and the *Statens Serum Institut* (SSI). Some figures are published on non-natural causes of death, including poisoning and acts of violence. Data on crime and justice is mainly drawn from the Central Register of Reported Criminal Offenses and the Central Criminal Register. Published statistics contain data on reported crime, charges, persons found guilty, conviction and the

⁷ Czech and English.

number of victims. These various statistics are specified by type of offense, including homicide and attempted homicide. Statistics Denmark does, however, not collect or process statistics on drug-related homicide (L. Lavrsen, personal communication, 20 February 2017).

In addition to these open sources, data on homicide is also collected for the development of two closed/semi-closed databases. First, homicide data is collected in the context of the forensic medical homicide database, which is maintained by the University of Copenhagen's Department of Forensic Medicine. The database includes all cases in which the manner of death is listed as homicide on the death certificate. Unlike most other cause-of-death data sources, the forensic database contains information on homicide circumstances such as the victim-perpetrator relationship and the perpetrator's motive (Coleville-Ebeling et al., 2014). Second, data on homicide is collected by the Ministry of Justice for the development of a homicide database based on convictions. The database is currently in the first stage of development, during which data is collected on all convictions of homicides reported between 2012 and 2016. With regards to drugs, the following variables are registered in the database: whether or not the perpetrator had taken drugs before the crime, whether or not the perpetrator is a drug user, and whether or not the perpetrator has previously been sentenced for drug crimes. Other variables include whether or not the perpetrator was gang related and a typology of the homicide (e.g. criminal milieu, robbery killing, etc.) (A. Boesen Pedersen, personal communication, 15 March 2017). These variables are the closest type of information to economic-compulsive and systemic drug-related violence provided by the database, but do not contain sufficient specified data to actually label them as such.

In Denmark, the body of literature on homicide addresses various sub-topics, including child homicide (e.g. see Laursen et al., 2011; Christiansen et al., 2007), intimate partner homicide (e.g. see Leth, 2009, and homicide trends and characteristics (e.g. see Leth, 2012). Some of these studies touch upon the issue of drug-related homicide. Leth (2010) provides an analysis of over 160 cases of homicide death in Southern Denmark between 1983 and 2007. Drawing data from the police and autopsy reports, the study shows that 4 per cent of the homicide victims was under the influence of drugs at the time of the crime. In 14 per cent of the homicide victims, one or more drugs were found in the blood sample. From a different viewpoint, Pedersen et al. (2008) studied deaths among drug users in Eastern Denmark, and found that 4 per cent died in a homicide event.

Estonia

Statistics Estonia (*Eesti Statistika*) annually publishes a bilingual⁸ statistical yearbook of Estonia (e.g. see Statistics Estonia, 2015). This report contains statistics on causes of death, crime and justice. The cause-of-death statistics are coded according to the ICD, although no specific data on deaths caused by homicide/assault is provided. Information on deaths caused by homicide can however be derived from the Estonian Cause of Death Registry, which operates since 2008. Crime and justice statistics presented in the statistical yearbook include the number of recorded cases of murder and manslaughter, as well as the number of persons incarcerated in penal institutions for (attempted) murder. No special homicide monitoring system has been developed in Estonia, so these statistics mainly stem from the general crime registration system of the Ministry of Justice (Salla et al., 2012:424). Other sources are the Department of Courts and the Prisons Department, which are both departments of the Ministry of Justice. Statistics Estonia does not publish nor maintain data on drug-related homicide (S. Tiitsmaa, personal communication, 15 February 2017). In addition to providing data on crime for Statistics Estonia, the Ministry of Justice also publishes crime reports (only in Estonian. See: Estonian Ministry of Justice, n.d.). The first report on crime in Estonia was published in 2007 (on year 2006) and has since been published annually. These reports contain annual crime and justice statistics on homicide (*mõrv, tapmine*), but no figures on DRH.

⁸ Estonian and English.

These data sources on homicide show that Estonia has a relatively high number of homicides. From 2006 to 2008, the average rate of violent deaths was the second highest in the EU (Salla et al., 2012). As the homicide rate in Estonia is well above the European average, the issue is of particular interest in Estonia. Still, with regards to domestic scientific literature, only few in-depth analyses of violent crime in Estonia have so far been published (Saar, 2010). The most comprehensive analyses on this topic are conducted by Lehti (1997;2001). However, as these analyses focus on the 90s, they fall outside of the scope of this study. More recently, Saar (2010) analyzed short and long-term trends in intentional homicide on a more general level, while Salla et al. (2012) provided a more in-depth trend analysis. These studies are mainly based on data from the above mentioned open homicide sources. As these data sources do not contain data on DRH, neither do the academic contributions. Furthermore, Ceccato (2009) analyzed a number of expressive and acquisitive offences in Tallinn between 2004 and 2005. This data was obtained from the Central Criminal Police in Tallinn. The study addresses drug-related offenses (i.e. possession, cultivation, production, sale, etc.) and homicide, but not violent crimes related to drugs and drug markets.

Finland

Statistics Finland (*Tilastokeskus*) publishes cause-of-death statistics and crime statistics via an interactive web database (Statistics Finland, n.d.). Data on causes of death include a category on homicide/assault, but no specific information on drug-related homicide. Crime statistics contain annual figures on homicide (murder, manslaughter and killing). This includes data on the number of suspects under the influence of alcohol and/or other intoxicant.

In addition to these open sources, homicide data is collected in the context of the Finnish Homicide Monitoring System (FHMS). The FHMS, launched in June 2002, is jointly managed by the Finnish Police College, the Police Department of the Ministry of the Interior and the University of Helsinki (the Institute of Criminology and Legal Policy, formerly the National Research Institute of Legal Policy). The FHMS contains information on characteristics of the crime, the victim, and the offender. It also contains post-crime information, such as data related to the investigation of the homicide. In total, the number of variables for each case is about 90 (Granath et al., 2011: 109-110). With regards to drug-related homicide, the FHMS contains data on offenders and victims being under the influence of drugs at the time of the homicide and offenders and victims being drug abusers. These data are available for both males and females. Similar data is provided on alcohol-related homicides. This data is based on information produced during preliminary police investigations. Information is collected directly by the leading investigator of each homicide, who fills in a compulsory electronic form.⁹ To verify that all homicide cases are included and that all information is acquired, the national crime reporting system of the police is used as a control measure.

Kivivuori et al. (2007) conducted a study on the incidence and patterns of homicide in Finland based on data from the FHMS. The authors note that drugs and other non-alcoholic intoxications – when compared to alcohol – only play a minor part in Finnish homicides:

In 2002–2006, 4 per cent of male homicide offenders and none of female offenders were under the influence of hard drugs, while 18 per cent of male offenders and 21 per cent of female offenders were under the combined influence of alcohol and psychosomatic drugs. Corresponding percentages for adult male victims were 4 per cent and 10 per cent, and for adult female victims 3 per cent and 10 per cent respectively (Kivivuori et al., 2007:9).

⁹ Police reports contain both quantitative data and an open-ended narrative appendix. The latter is an official description of the homicide circumstances, written by the leading investigator.

Furthermore, the prevalence of offenders and victims identified as drug users is respectively 27 and 14 per cent (ibid:12). These figures might seem considerable, but are far lower than the involvement of parties in homicide identified as being under the influence of alcohol or being an alcoholic.¹⁰ The authors therefore state that Finnish homicides are closely related to alcohol consumption, alcohol intoxication, and drinking situations. Data from the FHMS has also been published as part of a study on homicide in Finland, the Netherlands, and Sweden (see next chapter). This study's findings on Finland (2003-2006) show that the percentage of male and female offenders who were under the influence of drugs at the time of the homicide is respectively 22 and 19 per cent. For male and female victims, this is respectively 16 and 13 per cent. Furthermore, the study shows that 30 per cent of the male offenders and 12 per cent of the female offenders were drug abusers at the time of the homicide. Regarding male and female victims being drug abusers, the findings are respectively 19 and 8 per cent (Granath et al., 2011:67).

A number of other studies on homicide in Finland particularly zeroed in on the topics of filicide and differences between male and female homicide or filicide offenders (Häkkinen-Nyholm et al., 2009; Putkonen et al., 2009a; 2009b; 2011). For their study on gender differences in homicide, Häkkinen-Nyholm et al. (2009) used data from NAMA archives¹¹ and criminal reports¹² from the Finnish Police computerised Criminal Index File to analyse and compare male and female homicide offenders. Based on these sources, approximately 9 per cent (n=7) of the male offenders and 3 per cent (n=2) of the female offenders between 1995 and 2004 was under the influence of drugs during the homicide. Given these figures, the authors conclude that “there was no difference in the proportion of offenders being under the influence of alcohol or drugs at the time of the killing” (Häkkinen-Nyholm et al., 2009:77). NAMA archives were also analysed by Häkkinen. Her study focuses on homicide by strangulation and shows that between 1996 and 2002, 14 per cent of the offenders were diagnosed as drug dependent, while 10 per cent of the offenders was under the influence of drugs during the homicide (Häkkinen, 2007:79).

France

In France, the *Institut National de la Santé et de la Recherche Médicale* (INSERM) makes an annual count of causes of death, with ‘intentional homicide’ as a distinct category (Mucchielli, 2010:302). Statistics on homicide can also be retrieved from crime statistics. The responsible body for these statistics in France has been subject to change. From 1998 to 2009, crime statistics were annually published by the Ministry of Interior. From 2009 to 2015, this responsibility was taken over by the *Observatoire National de la Délinquance et des Réponses Pénales* (ONDRP). Since October 2015, crime statistics are published by InterStats (InterStats, 2017). Data is provided by the Statistical Department for Internal Security (SSMSI) of the Ministry of Interior. This data contains an annual homicide count based on French Police and Gendarmerie records (see below), but does not include data on drug-related homicide (anonymous SSMSI employee, personal communication, 3 March 2017). Finally, data on homicide can be retrieved from Court statistics – the oldest source of statistical data on the criminal population (Mucchielli, 2010:304). France is exemplary for the possible discrepancy between crime and justice statistics and Health statistics on homicide, as the former generally report twice as many homicides as the health authorities (Lappi-Seppälä & Lehti, 2014). None of these data sources, however, address the issue of drug-related homicide.

Official crime statistics draw data from the *état 4001* (form 4001). This is a closed source which contains the number of each type of crime (thus including homicide) and cleared cases as

¹⁰ Which are respectively 53 and 57 per cent (Kivivuori et al., 2007:12).

¹¹ Approximately 70 to 85 per cent of all homicide offenders are subjected to a forensic psychiatric evaluation as part of the trial procedure. These evaluations are conducted by the Finnish National Authority for Medicolegal Affairs (NAMA) (Häkkinen-Nyholm et al., 2009).

¹² Referring to the same type of police data as collected for the FHMS.

reported by the French Police and Gendarmerie. The data source is centralized and compiled at the national level (Roche, 2008). The system does however not provide as much detailed information as other closed sources, such as the CORAIL database. This database is maintained by the Operations Cell for Matching and Analysing Associated Offences (CORAIL) of the Paris Regional Criminal Investigation Department (DRPJ). In comparison to the form 4001, it contains much more rich data, both in terms of victims and the implicated persons. This source has been used by Scherr and Langlade (2014) to analyse the characteristics of homicides committed in Paris and the inner suburbs between 2007 and 2013. With regards to DRH, the authors identify several shortcomings of the CORAIL source:

[T]here is no information about their profession or level of intoxication (drug or alcohol) at the time the homicide was committed. Finally, one of the most important variables for analysing homicides – the relationship between the victim and suspect – is also missing in many instances (the level of completeness is 30%) (ibid:28).

The study's results do however shed some light on the latter. Of the 485 homicide cases in the sample, 17 cases (4 per cent) resulted from a conflict between drug traffickers (ibid:32), and can be considered cases of systemic violence. Other cases might also be cases of systemic violence (e.g. 'score setting between criminals') yet this cannot be extracted from the presented data.

Other studies on homicide in France mainly focus on the 80s and 90s (e.g. see Houel et al., 2003; 2008; Mucchielli, 2004a; 2004b). More recent studies compare the various (above discussed) sources on homicide between 1970 and 2008 (Mucchielli, 2008) and analyse the epidemiology of homicide in France between 1971 and 2010 (Mucchielli, 2012). Overall, research on homicide in France is scarce (Mucchielli, 2012) and the existing literature does not – with the exception of the above discussed study by Scherr and Langlade (2014) – address the issue of drug-related homicide.¹³

Germany

German cause-of-death statistics are published by the *Statistisches Bundesamt* (Destatis. See: Destatis, n.d.). These statistics are categorized following the International Statistical Classification of diseases and Related Health Problems (ICD). However, Destatis does not publish statistics on all categories of the ICD.¹⁴ In its publications, the ICD chapter on external causes of morbidity and mortality (which contains homicide deaths) is omitted. Data on homicide can directly be derived from crime statistics. These are annually published by the Federal Criminal Police Office (*Bundeskriminalamt*. See: Federal Criminal Police Office, n.d.) in both German and English and contain figures on murder and manslaughter. Statistics on the number of cases committed by hard drugs users (*Konsument harter Drogen*) and suspects under the influence of alcohol (*Tatverdächtige unter Alkoholeinfluss*) are available and disaggregated by offense, but only in the German crime statistics reports (K. Justen, personal communication, 22 February 2017). These figures show that the percentage of murder and manslaughter suspects remained fairly constant between 2000 and 2015 (see Table 3).

Table 3: Drug-related homicide in Germany (Federal Criminal Police Office, 2001-2016)

Year	Murder ¹⁵ suspect is hard drugs user	Manslaughter ¹⁶ suspect is hard drugs user
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¹³ Note that Mucchielli (2012) does state that the use of drugs was marginal among the studied homicide offenders and victims (p.309). This data however refers to earlier studies by Mucchielli (2004a; 2004b), based on pre-2000 data (a judicial sample of 105 homicides perpetrated in the Paris area in the 80s and 90s). Furthermore, Mucchielli (2012) states that of this sample, around 55 per cent of the homicide perpetrators and 40 per cent of the homicide victims were drunk during the homicide (p.309).

¹⁴ Destatis publishes on the categories I to XIX. Category XX contains external causes of morbidity and mortality.

¹⁵ *Mord*, § 211 StGB.

	<i>Persons</i>	<i>%</i>	<i>Persons</i>	<i>%</i>
2000	52	6	119	7
2001	64	8	136	8
2002	73	9	148	9
2003	58	7	154	9
2004	73	10	146	9
2005	75	10	150	10
2006	57	7	134	9
2007	77	11	131	8
2008	64	10	132	9
2009	53	6	131	7
2010	48	6	124	7
2011	80	9	114	6
2012	38	6	126	9
2013	49	8	149	11
2014	59	9	146	10
2015	59	10	137	10

The body of research literature on homicide in Germany is dominated by criminalistics and psychological studies (Birkel & Dern, 2012). Studies have focused on different subtypes of homicide – such as filicide (e.g. see Höynck & Görden, 2006; Höynck, 2010), serial killing (e.g. see Harbort & Mokros, 2001), intimate partner homicide by women in abusive relationships (e.g. see Braun, 2016), and the killing of inmates (e.g. see Lamott, 2009) – and tend to be based on specific sample populations or regions. In addition, there are a few studies that analyze the general development and epidemiology of homicide in Germany. The most recent study of this kind is conducted by Birkel & Dern (2012), who addressed homicide trends, incident characteristics, perpetrator characteristics, victim characteristics, possible explanations, and policies. Still other studies analyse homicide from a legal perspective (e.g. see Kinzig, 2015) or homicide as compared to other causes of unnatural death (e.g. see Lukaschek et al., 2012). Although there is a considerable body of literature on homicide in Germany, the phenomenon of drug-related homicide has not received scholarly attention.

Greece

The Hellenic Statistical Authority (*Ελληνική Στατιστική Αρχή*) publishes both cause-of-death statistics and crime and justice statistics. Statistics on the causes of death are coded in accordance to the ICD, and published annual figures include a category on homicide/assault (Hellenic Statistical Authority, n.d.-a). Crime and justice statistics are prepared by the authority's Justice and Public Order Statistics Section, and include data on committed offenses, persons sentenced, prison populations and prisoners awaiting trial (Hellenic Statistical Authority, n.d.-b; n.d.-c; n.d.-d; n.d.-e). These statistics do not provide data on specific types of crime. More specific crime statistics can be found in the statistical police reports (Greek Ministry of the Interior, n.d.). Since 2014, the Hellenic Police annually publishes a statistical yearbook (only in Greek, earlier yearbooks can be obtained by request). These reports contain data on specific offenses – including manslaughter (*Ανθρωποκτονία από αμέλεια*) and intentional homicide (*Ανθρωποκτονία με πρόθεση*) – by location (region), month, perpetrator's origin (Greek or foreigner) and perpetrator's age. None of these Greek data sources contain data on drug-related homicide.

Research literature on homicide in Greece has to a large extent focused on homicide and law in Ancient Greece, the origin and evolution of the institution of vendetta, and traditional and moral values that might encourage interpersonal violence. Several studies on patterns of homicide in Greece were conducted in the 60s and 90s (Christodoulou, 1966; Safilios-Rothschild, 1969; Chimbos, 1993). Little has been published on homicide patterns in Greece afterwards (Fragkouli et al., 2016), with studies on homicide patterns in the region of Epirus as a notable exception (Vougiouklakis &

¹⁶ *Totschlag* and *Tötung auf Verlangen*, § 212, 213, and 216 StGB.

Tsiligianni, 2006; Fragkouli et al., 2016). Vougiouklakis and Tsiligianni analysed autopsy reports and prosecution authorities' files on homicide cases between 1998 and 2005, and found no evidence of use or psychotropic drugs among homicide offenders (2006:318). Fragkouli et al. (2016) expanded this study's measurements to 2013. The authors' toxicological analysis does not mention any homicide victim being tested positive for drugs.¹⁷

Hungary

Hungarian Central Statistical Office (*Központi Statisztikai Hivatal*, HCSO) publishes both cause-of-death statistics and crime and justice statistics. Data on these topics can be retrieved from the annual Hungarian statistical yearbook (e.g. see Hungarian Central Statistical Office, 2015) and from the digital dissemination database (Hungarian Central Statistical Office, n.d.). Cause-of-death statistics are classified according to the ICD. Publications by the HCSO however omit the ICD chapter on external causes of death. The statistics on crime and justice are provided by the Ministry of Interior and the Prosecutor General's Office. These include data on the number of registered crimes and the number of perpetrators, which are both specified by type of offense (including homicide and attempted homicide). These publications by the HCSO do not contain data on drug-related homicide, as the office is not engaged in collecting such data (E. Pék, personal communication, 1 March 2017). Furthermore, both the Ministry of Interior and the Prosecutor General's Office also publish crime and justice statistics. Statistics published by the Ministry of Interior (only in Hungarian. See: Hungarian Ministry of Interior, n.d.) contain data on the number of homicides (*emberölés*) in each region as well as nation-wide. The Prosecutor General's Office annually publishes homicide statistics regarding registered crimes and the number of convicted persons (e.g. see Croatian Prosecutor General's Office, 2016). Similar to the data provided by HCSO, these statistics do not contain data on DRH.

In terms of literature, homicide in Hungary gained little scholarly attention. Important contributions were made on homicide against infants, children, and adolescents in Budapest (Törő et al., 2011), domestic homicide (Morvai, 1998), and offender characteristics (Farsang & Kocsor, 2016), yet these studies do not contain data on drug-related homicide.

Ireland

In Ireland, cause-of-death statistics are published by the Department of Health (*An Roinn Sláinte*) and the Central Statistics Office (*An Phríomh-Oifig Staidrimh*). Data on the number of deaths caused by homicide/assault can be extracted from the CSO's StatBank (Central Statistics Office Ireland, n.d.-a). The Irish National Police Service (*An Garda Síochána*) publishes annual reports that contain crime statistics (National Police Service Ireland, n.d.). These reports present figures on the total number of crimes of different 'crime offense groups' – including 'homicide offenses'. In Ireland, this category includes murder, manslaughter, infanticide as well as dangerous driving leading to death. Annual statistics on each of the separate crimes are published by the Irish Central Statistics Office (Central Statistics Office Ireland, n.d.-b). None of these open sources however contain any data on drug-related homicides. With regards to the CSO, this is due to the fact that the statistical office does not collect data on DRH (A. Murray, personal communication, 16 February 2017). This is not the case for the Irish Police, which registers state and circumstances of both the perpetrator and the victim of a homicide event. This information is recorded in the Garda crime files.

With regards to research literature, crime in Ireland is an underdeveloped field of study – at times described as "Ireland's absentee discipline" (O'Donnell, 2005:99). There have nonetheless been a number of important contributions on the topic of homicide. Rottman (1980) examined the above mentioned Garda crime files to analyse the level and patterns of crime (including homicide) in

¹⁷ The authors sampled 38 biological specimens for toxicological analysis.

Ireland between 1951 and 1975. These files have also been used for two studies on homicide in Ireland between 1972 and 1996 (Dooley, 1995; 2001). Both reports by Dooley present a combined figure on the number of homicide suspects that were intoxicated during the homicide event. The first report shows that between 1972 and 1991, 47 per cent of the perpetrators and 42 per cent of the victims was intoxicated (Dooley, 1995:19). Between 1992 and 1996, these figures are respectively 39 and 42 per cent. In these studies, ‘intoxication’ refers to both alcohol and drugs. No similar analyses or other studies that address the issue of DRH have been published since.

Italy

The Italian National Institute of Statistics (*Istituto Nazionale di Statistica*, ISTAT) publishes data on causes of death and crime. Cause-of-death statistics include a category on murder/assault, and can be specified by sex and age group (ISTAT, n.d). Crime statistics contain data on number of reports of persons suspected by the police forces to have committed crime and the number of crimes reported to the court by the police (ibid). These crime statistics are specified by type of crime, including massacre, voluntary murder, attempted murder, infanticide, unintentional homicide and manslaughter. The number of murders is broken down into several subcategories, among which murders for the purpose of theft or robbery. The ISTAT databases however contain no specific data on drug-related homicide (L. Fabiano, personal communication, 20 February 2017). Although the police statistics published by ISTAT thus do not cover DRH, this is not to say that the police does not register such data. Homicide characteristics are registered by the police for investigative purposes only. This concerns descriptive information which is exclusively for the use of the police forces and is not processed into statistics (E. Belli, personal communication, 7 March 2017).

A third source on homicide in Italy is the homicide database of the Economic and Social Research Center (*Ricerca Economica e Sociale*, EURES). This database contains information on intentional homicide (*omicidi dolosi*), such as the perpetrator’s motive and the relationship between victim and perpetrator, which has been collected since 1990. Information is collected from various sources, including national and local newspapers, prosecution and court statistics, the Data Bank (DEA) of the National Agency Press (ANSA) and archives on criminal events of the Ministry of Interior’s Department of Criminal Police Service and Analysis. Periodically, EURES publishes an EURES-ANSA report on homicide in Italy, which contains homicide data on the preceding years. This database includes information on homicides committed under the influence of drugs (A. Curti, personal communication, 28 June 2017).

The academic literature on homicide in Italy provides some additional insights into drug use by homicide perpetrators and victims. For instance, Roma et al. (2012) studied the epidemiology of homicide-suicide in Italy. The authors confirmed alcohol or drug problems in 10 per cent of the homicide-suicide offenders and less than 1 per cent of the victims between 1985 and 2008. Preti & Macciò (2012) find that in 2007 and 2008 approximately 3 per cent of the homicide offenders suffered from active substance abuse (alcohol or otherwise). Furthermore, Verzeletti et al. (2014) studied the characteristics of homicide victims in Brescia County. For 80 victim cases, a toxicological screening was conducted. Toxicological findings showed that 60 per cent of the victims was tested positively for substances, of which 40 per cent for drugs (drugs alone or both drugs and alcohol). Several other analyses of homicide in Italy exist (e.g. see Mastonardi, 2012; Sisti et al., 2012), yet these do not address the issue of DRH.

Latvia

Latvia’s Central Statistical Bureau (*Centrālā Statistikas Pārvalde*) is the main source for statistics on homicide in Latvia. The bureau’s interactive database contains (among others) data on causes of death, crime, and justice (Central Statistical Bureau Latvia, n.d.-a; n.d.-b). Since 2010, cause-of-death data is compiled by the Centre for Disease Control and Prevention (CDCP). The data allows a

breakdown of external causes of mortality by specific causes, including homicide/assault. Similarly, both statistics on recorded crimes and convicted persons can be specified by type of crime, which includes intentional homicide. Specific data on drug-related homicide is not compiled by the Statistical Bureau. There also appears to be no research literature addressing the drug-homicide nexus.

Lithuania

The Official Statistics Portal (*Oficialiosios Statistikos Portalas*, OSP), part of the Ministry of Interior, is the main source for statistics on Lithuania. The OSP publishes both cause-of-death statistics and crime statistics. Cause-of-death data can be specified to ‘death by assault, homicide’, but provide no information on drug-related homicide (Official Statistics Portal Lithuania, n.d.-a). With regards to crime statistics, the statistics are limited to the total number crimes (Official Statistics Portal Lithuania, n.d.-b). However, a query can be made for more specific information on homicide. Crime statistics in Lithuania are based on data of the Register of Criminal Offences. This register does not contain DRH information and consequently neither do the crime statistics (D. Bikmanaite, personal communication, 10 February 2017). The OSP database does contain the total annual count of criminal offenses committed by intoxicated persons.

The data prepared by the OSP is used by Andresen (2012) to analyze the epidemiology of homicide in Lithuania. This study is currently the most comprehensive analysis on homicide in Lithuania, discussing incident characteristics, victim characteristics, perpetrator characteristics, as well as explanations. Other contributions to this field of study include Andresen’s (2010) study on the impact of Lithuania’s accession to the EU on violent crime in Lithuania, and Lunevicius et al.’s (2010) study on the epidemiology of injury in Lithuania. This body of literature does, however, not address the phenomenon of drug-related homicide. In contrast, alcohol in relation to homicide did receive scholarly attention. For instance, Benošis and Rybalko (2007) zero in on alcohol consumption of homicide victims.

Luxembourg

Statistical information on Luxembourg is published on the Statistics Portal. Operating this portal is the responsibility of the National Institute of Statistics and Economic Studies (STATEC/NSI). This portal contains statistics on health and crime and justice. The former is, in principle, centralized by the departments of the Ministry of Health. Health statistics include data on causes of death, which are coded in accordance to the ICD. The published cause-of-death statistics contain data on an ICD shortlist of categories, including the category on deaths caused by homicide/assault (STATEC, n.d.-a). The crime and justice statistics on the portal stem from the Ministry of Justice, the Superior Court of Justice, penal institutions and the Ministry of Foreign Affairs (STATEC, n.d.-b). This data is limited to categories of offenses (e.g. acts of violence towards people). More specific data can be found in the annual report on crime and police activity published by the Grand-Ducal Police (e.g. see Grand-Ducal Police, n.d.). These reports (only in French) contain annual data on homicide (*homicides volontaires*), which includes the legal definitions of murder (*meurtre*) and manslaughter (*assassinat*). None of these sources however contain data on drug-related homicide in Luxembourg. There also appears to be no research literature addressing the drug-homicide nexus.

Malta

The Maltese Ministry of Health annually maintains a Mortality Register. Data from the register is annually published in mortality reports (Ministry of Health Malta, n.d.). This includes data on deaths caused by homicide/assault. The principal source of information for these statistics are death certificates. For most other topics, the National Statistics Office (NSO) of Malta is the main source for statistics on Malta. The NSO’s unit C1 (Living Conditions and Culture Statistics) has published

crime statistics in collaboration with the police authorities, the Ministry of Justice, the law courts and other relevant departments. These crime statistics are drawn from the Police Incident Reporting System (PIRS). The most recent publication containing homicide data is the *Demographic Review 2010* (National Statistics Office Malta, 2011). The review contains the annual number of homicides (the combined figure on murder, manslaughter, euthanasia and infanticide) between 2000 and 2010. More recent statistics can be acquired at the police by request. The prepared crime statistics do not present information on the relationship between homicide cases and drugs.

In terms of research literature, the most extensive analysis to date of crime patterns and trends in Malta has been conducted by Formosa (2007). The small body of literature on crime in Malta does however not provide any insights into the extent of drug involvement in homicides in Malta.

The Netherlands

Crime and cause-of-death statistics are published by Statistics Netherlands (*Centraal Bureau voor de Statistiek*, CBS). This includes a category on crimes against life (*levensmisdriven*. See: CBS, 2017). This constitutes a combined category on the legal definitions of murder, manslaughter, killing on request and illegal abortion (CBS, n.d.-a). Statistics Netherlands also publishes figures on homicide (murder and manslaughter) as part of its 'Statistics on non-natural causes of death' database. This includes data on the modus operandi, the location, the number of victims and the victims' age (CBS, n.d.-b). A third source on homicide is the annual Elsevier homicide report. Elsevier, a weekly Dutch magazine, annually publishes a report on all homicides that have taken place in the Netherlands based on newspaper articles by the Netherlands National News Agency (*Algemeen Nederlands Persbureau*, ANP) as well as police files. Both the cause of death statistics and the Elsevier reports however do not (systematically) address the homicide-drugs relationship.

The most detailed source on homicide in the Netherlands is the Dutch Homicide Monitor. The Dutch Homicide Monitor is an ongoing monitoring system that draws data from seven other sources: (1) homicide-related newspaper articles by the ANP, (2) the above mentioned Elsevier annual homicide report, (3) files from the regional police units, (4) files from the National Bureau of Investigation¹⁸, (5) the Violent Crime Linkage Analysis System (VICLAS) from the National Bureau of Investigation¹⁹, (6) files from the Public Prosecution Service of the Ministry of Justice, and (7) files from the Criminal Justice Knowledge Centre. These seven sources partly overlap, but are also complementary to one another. The Dutch Homicide Monitor contains information on victim and perpetrator characteristics, the offender-victim relationship, the motive, the modus operandi, the location. This includes information on the relationship between the crime and drugs.

The monitor is a closed/semi-closed source, maintained by Leiden University and the Netherlands Institute for the Study of Crime (NSCR). Still, a number of published studies have analysed homicide in the Netherlands based on this monitoring system (Smit et al., 2001; Leistra & Nieuwbeerta, 2003; Nieuwbeerta & Leistra, 2004; Smit & Nieuwbeerta, 2007; Nieuwbeerta & Leistra, 2007; Ganpat & Liem, 2012). Several of these studies addressed the drug-homicide link. Between 1998 and 2004, an average of 15 per cent of all homicide perpetrators were found to be addicted to drugs and 7 per cent of the perpetrators was under the influence of drugs during the homicide. Regarding victims, 5 per cent was under the influence of drugs during the crime. Furthermore, of the homicides in 1998, 2002, 2003 and 2004 that are connected to the criminal circuit, respectively 9, 8, 9, and 16 per cent is related to a drug deal (Smit & Nieuwbeerta, 2007). This generally involved rip-

¹⁸ However, in 2005, the National Bureau of Investigation stopped registering homicide incidents on the national level.

¹⁹ VICLAS contains information about homicide cases in which the victim(s) had been sexually assaulted or raped.

deals to gain possession over substances (ibid).²⁰ In 2003, in 6 per cent of the homicide cases a customer killed his drug dealer. Vice versa this occurred in 2 per cent of the cases. In an equal number of homicides a drug used killed a fellow drug user (ibid). These figures are similar to 1998 (ibid; Smit et al., 2001). In total, one-third of the homicides (1992-2001) within the criminal circuit can be considered systemic violence related to the drug market (Leistra & Nieuwbeerta, 2003:122).

Other research on contemporary homicide in the Netherlands tends to focus on several main areas. A first area of research is the epidemiology of homicide, victims, and perpetrators (e.g. see Bijleveld & Smit, 2006; Nieuwbeerta & Leistra, 2007; Van Os et al., 2010; Ganpat & Liem, 2012). Other recent studies have focused on homicide subtypes, either based on the victim-offender relationship, such as intimate partner homicide (e.g. see Alisic et al., 2015), child homicide (e.g. see Liem & Koenraadt, 2008a), multiple family homicide (e.g. see Liem & Koenraadt, 2008b), and homicide-suicide (e.g. see Liem et al., 2009; Liem, 2010), or the offender's motive, such as criminal liquidations (e.g. see Van de Port, 2001) and honor-related homicides (e.g. see Nauta & Werdmölder, 2002). Finally, several studies have relied on national data from the Dutch Homicide Monitor to analyse the sentencing of homicide offenders (e.g. see Johnson et al., 2010; Vries et al., 2010). Several of these studies also touch upon the drug-homicide nexus. Insights into DRH in the Netherlands after 2000 is however limited to the earlier discussed studies based on the Dutch Homicide Monitor. Somewhat more dated insights are provided by Bijleveld and Smit (2006), who made a classification of different types of homicides that occurred in 1998. One distinct category is 'criminal: drug-related', exemplified by the killing of a drugs dealer by a customer following a dispute. Bijleveld and Smit show that 8 per cent of the homicide victims in 1998 is related to the criminal drug circuit. (p.201).

Norway

Data on homicide in Norway is published by Statistics Norway (*Statistik Sentrabyrå*, SSB), the Norwegian Institute of Public Health (*Folkehelseinstituttet*, NIPH), and the police. Until recently, Statistics Norway was responsible for both type of statistics. However, in 2013, this role to maintain Mortality statistics was taken over by the NIPH, which is responsible for the Norwegian Cause of Death Registry (NCoDR) per January 2014. Data from the registry contains information on deaths caused by assault and homicide (NIPH, n.d.). This data is based on death certificates, which are run through a semi-automatic coding program that selects the underlying cause of death according to the ICD (NIPH, 2016). Crime and justice statistics are published by the Division for Social Welfare Statistics of Statistics Norway (Statistics Norway, n.d.). Crime statistics are drawn from the Norwegian Police ICT Services, and contain data on the annual reported cases of murder and manslaughter. Justice statistics are extracted from the Norwegian Central Criminal Record and Police Information System (SSP), and provide data on sanctions and imprisonment by type of crime. Although both statistics by the SBB and NIPH contain data on homicide in Norway, they provide no insights in the specific area of drug-related homicide (C. Lycke Ellingsen, personal communication, 15 February 2017; R. Håset Drager, personal communication, 17 February 2017).

In addition to crime statistics published by the SBB, the National Criminal Investigation Service (*Kripos*) of the Norwegian Police publishes an annual homicide overview (*drapoversikt*, only in Norwegian). These overviews are based on the Kripos homicide monitor, and contain information on the number of homicides, the modus operandi, the location, the motive, the offender-victim relationship, and whether or not the perpetrator was intoxicated during the homicide. With regards to the latter, statistics are presented on alcohol (*alkohol*), drugs (*narkotika*), medication (*medikamenter*)

²⁰ As there is no information on whether the rip-deals were for personal drug use, the mere aim to gain possession over drugs (in the criminal circuit) is insufficient to label this type of events as economic-compulsive violence.

and a combination of intoxicating substances (*blandingsrus*). Data on the latter three is shown in Table 4.

Table 4: Drug-related homicide in Norway, number of intoxicated persons (Kriplos, 2010;2015)

Year	drugs		Medication		Combination of substances	
	Offender	Victim	Offender	Victim	Offender	Victim
2000	1	2	1	/	3	1
2001	8	3	/	2	6	1
2002	5	5	3	2	5	1
2003	1	4	3	3	5	2
2004	3	2	3	/	8	1
2005	1	2	2	/	5	3
2006	3	2	6	2	5	2
2007	5	1	/	2	4	1
2008	2	1	/	1	7	2
2009	5	4	1	/	3	3
2010	5	3	/	1	1	4
2011	8	5	4	1	6	3
2012	7	6	1	1	/	1
2013	8	3	/	2	6	3
2014	3	1	2	4	4	4
2015	2	2	/	/	/	1

Homicide research in Norway has focused, among others, on homicide patterns (e.g. see Kristoffersen et al., 2014; Lunde, 2006), patterns in neonaticide (e.g. see Ottesen (2012), intimate partner homicide (e.g. see Vatnar, 2015; Vatnar et al., 2017), and the incidence of amnesia among homicide defendants (Grøndahl et al., 2016). Lunde (2006) studied homicides between 2000 and 2004, and concluded that homicides resulting from drug-fights and gang-fights showed an increased tendency for the period 2000-2004 as compared to prior periods. In terms of substance use, Lunde finds that alcohol is the most frequent stimuli involved in homicides. In the cases in which the perpetrator was under the influence of drugs during the crime, most often the perpetrator used more than one type of drug. Insights into drug use by homicide victims can be derived from Kristoffersen et al. (2014), who studied homicide patterns in Norway between 1895 and 2009. Based on an examination of 196 homicide victim cases, the authors analysed homicide rates, the perpetrator-victim relationship, the modus operandi, the location and the victims' age, gender, nationality, and drug use. Regarding the latter, in 45 of the victim cases (23 men and 22 women), drug were detected in the blood, including benzodiazepines and tetrahydrocannabinol (p.2-3). 18 victims were tested positive for both drugs and ethanol (p.3).

Poland

Poland's Central Statistics Office (*Główny Urząd Statystyczny*, GUS) annually publishes a bilingual²¹ statistical report. This report contains cause-of-death statistics coded in accordance with the ICD. Figures on deaths caused by homicide are however not enclosed in the report; the category on 'injuries and poisonings by external cause' only specifies transport accidents and suicides. The yearbook also contains statistics on ascertained crime, detection rates and number of persons sentenced, all of which are specified by type of crime, including homicide (GUS, n.d.). These statistics have been prepared on the basis of police statistics, supplemented with information on investigations conducted by the public prosecutor's offices and family on juvenile proceedings in courts (GUS, 2013). Specific information on drug-related homicide is not collected by the Statistics Office (H. Dabrowko, personal communication, 17 February 2017).

²¹ Polish and English.

Recent studies on homicide in Poland include an analysis of autopsies carried out in the Forensic Medicine Department (Medical University of Silesia) between 1991 and 2002 (Rygor et al., 2005), an analysis of procedures regarding forensic examination used in homicide trials between 2000 and 2010 (Juszka & Juszka, 2015), and a more in-depth analysis of two homicide-suicide cases by Bloch-Boguslawska et al., (2006). These studies do not provide figures on the extent of drug involvement in homicides in Poland.

Portugal

Statistics Portugal (*Instituto Nacional de Estatística*, INE) is the Portuguese entity responsible for ensuring the production and dissemination of official statistical information. Against this backdrop, the institute collects and publishes data on causes of death, crime and justice (Statistics Portugal, 2015; n.d.). Cause-of-death statistics are coded according to the ICD, and contain data on deaths by homicide and injuries purposely inflicted by others. Published crime and justice statistics by INE are limited to categories of crime (e.g. crimes against life) and do not provide data on specific types of crime. More detailed statistics are published by Ministry of Justice's Directorate-General for Justice Policy (DGJP). This includes separately available statistics on the different types of crimes against life: manslaughter, traffic accidents, other negligent manslaughter, abortion, and other crimes against life

(DGJP, n.d.). The directorate-general draws from the Criminal Police, Public Security Police, National Republican Guard, Customs Tax Authority, Criminal Police, Economic and Food Safety Authority, Immigration and Borders Service, Customs Tax Authority, District Tax Directions, Anti-fraud Service of the Customs Directorate-General, Public Security Police, National Direction and National Police Unit of the Public Security Police, National Republican Guard, Territorial Commands, National Road Traffic Unit, Safety Unit and State Honors, Intervention Unit and the Coastal Control Unit. The data collected and processed by the directorate-general does not have a degree of disaggregation that allows to extract information on DRH (A. Mendes de Almeida, personal communication, 17 February 2017). Consequently, neither does INE publish any data on drug-related homicide (anonymous INE employee, personal communication, 14 February 2017).

In terms of research literature, few studies seem to have focused on homicide in Portugal. Recent studies have focused on elder homicide (e.g. see Coelho et al., 2010) and intimate partner homicide (e.g. see Pereira et al., 2013). Furthermore, an ongoing study by the Research Unit in Criminology and Behavioural Sciences, ISMAI (University Institute of Maia) focuses on homicides in the North of Portugal. Regarding drug-related homicide, Pereira et al. (2013) found that 7 per cent of the studied homicide victims (n=31) had used drugs and 31 had per cent used medication before the homicide.

Romania

The National Institute of Statistics (*Institutul National de Statistica*, INS) annually publishes a bilingual²² statistical report of Romania (Romanian National Institute of Statistics, 2016). This report contains cause-of-death statistics, police statistics, and justice statistics. Causes of death are coded according to the International Classification of Diseases. Data presented in the annual reports is mainly limited to categories, rather than specific causes of death. Police statistics include offenses investigated and solved by the police. These statistics are provided by the General Inspectorate of Romanian Police within the Ministry of Interior. Justice statistics contain information on the number of persons convicted by type of crime and are provided by the Superior Council of Magistracy - which annually receives crime data from the courts, prosecutor's offices, and police department (Trandafir, 2014:319). Both police and justice statistics provide figures on murder,

²² Romanian and English.

attempted murder, involuntary homicide and deadly attacks. INS does not collect data on drug-related homicide (M. Radulescu, personal communication, 1 March 2017). Hence, the published cause-of-death, police and justice statistics do not provide insights into this topic. Research literature on homicide in Romania is scarce and also does not address the issue of DRH.²³

Slovakia

The Statistical Office of the Slovak Republic (*Štatistický úrad Slovenskej Republiky*) annually publishes a source book of demographic statistics ('The population change in the SR'. E.g. see: Statistical Office of the SR, 2015a). This report includes data on the number of deaths causes by homicide/assault. The Statistical Office also publishes crime statistics (Statistical Office of the SR, 2015b). These statistics are based on information from the Registration Statistical System of Criminality, which is maintained by the Slovak Police, as well as supplementary data provided by the Railway Police, the Military Police, the Corps of Prison and Court Guard, and the Customs Directorate. These statistics include the annual murder count, but contains no information to what extent these murders are drug-related. In addition, police crime statistics are also annually published by the Ministry of Interior (only in Slovak, see Ministerstvo vnútra SR, n.d.). These statistics contain figures on approximately 175 different types of offenses, including murder (*vraždy*) and manslaughter (*zabitie*). The number of crimes committed under the influence of drugs (*vplyv drog*) or alcohol (*vplyv alkoholu*) can be derived for each offense. As Table 5 shows, there are very few known cases of homicide cases in which the offender was intoxicated by drugs. No economic-compulsive or systemic type of DRH data is registered by the Slovak Police (S. Grófová, personal communication, 15 February 2017). There appears to be no research literature on the topic of DRH in Slovakia.

Table 5: Drug-related homicide in Slovakia (Ministerstvo vnútra SR, 2001–2016)

Year	Total number of intentional homicides	Number of homicides committed under influence of drugs ²⁴
2000	143	1
2001	129	2
2002	138	1
2003	146	2
2004	122	0
2005	106	1
2006	89	0
2007	98	1
2008	94	0
2009	84	1
2010	89	2
2011	96	1
2012	75	3
2013	78	2
2014	72	1
2015	48	0

Slovenia

The interactive database of the Statistical Office (*Statistični Urad*) contains data on accused, denounced and convicted persons by type of crime, including murder, negligent homicide and infanticide (Statistical Office RS, n.d.). These justice statistics stem from the Ministry of Justice, the Constitutional Court, the Public Prosecutor's Office and regular statistical surveys in the field of crime statistics by the Statistical Office. In addition, annual reports published by the police (since

²³ In contrast, some insights into alcohol abuse among homicide offender characteristics can be derived from Balica and Stöckl's (2016) study on homicide-suicide in Romania and the role of migration.

²⁴ All cases refer to murders. Statistics on manslaughters committed while intoxicated are either 0 or not available.

2010 only in Slovenian) contain crime statistics on murder (*umor*), attempted murder, manslaughter (*uboj*) and attempted manslaughter offenses (Ministrstvo za notranje zadeve, Policija, n.d.). Although these data sources provide insights into homicide in Slovenia, none of these sources provide any information on DRH. The same goes for the body of research literature on homicide in Slovenia, which has mostly been studied as one of many cases in international comparative studies (see next chapter). Still, some literature has zeroed in on homicide in Slovenia specifically (e.g. see Podreka, 2014), although not on the topic of DRH.

Spain

In Spain, the National Statistics Institute (*Instituto Nacional de Estadística*, INE) is the responsible body for large scale statistical operations. Against this backdrop, INE publishes cause-of-death and justice statistics (INE, n.d.). The former provide data on the number of deaths caused by homicide, while the latter contains data on the number of persons convicted for 'homicide and its forms'. The statistics on convictions are compiled by using the Central Register of Convicted Persons, which is maintained by the Ministry of Justice. Although these sources provide insights into homicide in Spain, INE does not collect specific information on drug-related homicide (M. Pilar Bernardo, personal communication, 20 February 2017). A third data source on homicide are police statistics published by the Ministry of Interior (only in Spanish) on an annual and (more recently) quarterly basis (e.g. see Ministerio del Interior, n.d.). This data is supplied by the various Spanish police services via the Statistical Crime System (*Sistema Estadístico de Criminalidad*, SEC). The periodical publications contain data on regional and national crime and include combined figures on murder (*asesinato*) and manslaughter (*homicidio*). Like the homicide data published by INE, the police statistics do not contain data on drug-related homicide.

Homicide in Spain has received little scholarly attention (Medina, 2012). Most of the research literature has been conducted by Spanish epidemiologists and historians (ibid). Recent studies on this have especially focused on gender violence (e.g. see Cases et al., 2007; 2008; Lucena et al., 2008). Furthermore, Medina (2012) conducted a comprehensive study on the epidemiology of homicide in Spain. Insights into drug use by homicide victims are provided by Lucena et al. (2008), who studied various incident and victim characteristics by examining forensic autopsy reports of homicides in Sevilla (2004-2007). Regarding DRH, the authors found positive results for benzodiazepines (14 per cent of the cases), cocaine (12 per cent of the cases), opiates (11 per cent of the cases), and tetrahydrocannabinol (9 per cent of the cases).

Sweden

Data on homicide in Sweden is collected by the National Board of Health and Welfare (*Socialstyrelsen*) and the National Council for Crime Prevention (*Brottsförebyggande rådet*, Brå). Cause-of-death statistics are published by the former. Data for the Health and Welfare Death Register has been collected since 1997. Data is coded according to the ICD and the interactive database allows users to select specific causes of death (including homicide/assault) to create custom made tables (National Board of Health and Welfare, n.d.). Crime and justice statistics are published by Brå in the annual *Kriminalstatistik* report (e.g. see Brå, 2015). These reports, in Swedish only, contain data on reported crime, processed cases, number of suspects and number of convictions. All these statistics provide data on murder (*mord*), manslaughter (*dråp*), infanticide (*barnadråp*) and assault leading to death (*misshandel med dödlig utgång*). Brå also maintains a semi-closed source dataset on cases of lethal violence committed in Sweden. The data collected covers the legal definitions of murder, manslaughter and assault resulting in death. Data from this dataset primarily draws from reported cases of lethal violence to the police, court verdicts, and preliminary investigations concerning lethal violence in cases where there are no indications in the data from the public prosecutor that the initial

police report led to anyone being sentenced. The database contains data on offenders and victims being under the influence of drugs at the time of the homicide and offenders and victims being drug abusers. Data from this Brå database has been published in the first report on the European Homicide Monitor, which focuses on the period 2003-2006 (see next Chapter). Within this period, the percentage of male and female offenders who were under the influence of drugs at the time of the homicide is respectively 21 and 13 per cent. For male and female victims, this is respectively 14 and 4 per cent. Furthermore, the study shows that 37 per cent of the male offenders and 20 per cent of the female offenders were drug abusers at the time of the homicide. The number of male and female victims being drug abusers is much lower: respectively 18 and 7 per cent (Granath et al., 2011:67).

Aside from the European Homicide Monitor project, relatively few studies have focused on homicide in Sweden (Granath, 2012). Sweden's homicide research tradition can be described as psychiatric and forensic (Kivivuori & Lehti, 2011). Main contributions include Von Hoffer's (2008) analysis of homicide rates between 1750 and 2005, Rying's (2007; 2008) publications on the epidemiology of homicide, Belfrage and Rying's (2004) work on spousal homicide, Sturup and Lindqvist's (2014) study on homicide offenders with schizophrenia spectrum disorders, Hedlund et al.'s (2016) study on child homicide, Johansson et al.'s (2007) comparison of homicide offenders and victims, and Granath's (2012) overview of homicide trends, patterns, explanations, and policies. The latter provides for the most comprehensive study on homicide in Sweden so-far. Regarding drugs, Granath points out the low prevalence of drug use in Sweden, which might lead one to expect the number of drug-related homicides to be relatively low – at least in a global perspective (p.407). Nonetheless, the author also underlines that the relative population of heavy drug abusers is similar to that of other European countries, and that this – in combination with the government's hard stance against drugs – does result in drug-related violence (ibid). Other studies supplement this statement with empirical findings. For instance, Hedlund et al. (2016) find that 8 per cent of the child homicide offenders were adjudged to be suffering from substance misuse (p.93).

Turkey

The Turkish Statistical Institute (*Türkiye İstatistik Kurumu*, Türk/TurkStat) publishes cause-of-death statistics as well as justice statistics. Cause-of-death statistics have been collected since 1931, but are only available for Turkey as a whole since 2009. A main data source for these statistics is the Central Population Administrative System (MERNIS), which has become the backbone of the e-Government infrastructure in Turkey (Turkish Ministry of Interior, 2016). Causes of death are coded according to the International Classification of Diseases. The published statistics, however, only cover several broad categories and no specific figures on deaths caused by homicide (see TurkStat, n.d.-a). More detailed data is available at the provincial level (Özdemir et al., 2015). Justice statistics cover the number of persons being sent to prison by type of crime and level of education as well as figures on juvenile charges by type of crime (e.g. see TurkStat, n.d.-b; n.d.-c; 2015; 2016). Both types of justice statistics provide figures on homicide in Turkey. These and other crime statistics are however currently only partially available. Furthermore, neither the justice statistics nor the cause-of-death statistics provide any information drug-related homicide (anonymous TurkStat employee, personal communication, 21 February 2017).

The body of research literature on homicide in Turkey has focused patterns of homicide in general (e.g. see Hilal et al., 2005; Kugu et al., 2008) and on subtopics such as homicide-suicide (e.g. see Dogan et al., 2010), filicide (e.g. see Karakus et al., 2003; Eke, et al., 2014), parricide (e.g. see Buyuk et al., 2011), honor killings (e.g. see Ozdemir et al., 2013), and firearm-related deaths (e.g. see Goren et al., 2003). This body of literature provides some insights in drug use by both the homicide perpetrator and victim. For instance, Kugu et al. (2008) found that 9 per cent of convicted homicide offenders was diagnosed as cannabis abusers and 6 per cent was diagnosed as multi-substance abusers before conviction (p.109). Furthermore, Buyuk et al. (2010), who studied 39 cases of

adolescent parricide offenders (1994–2005) state that “there was no history of substance abuse or use of any substance at the time of murder” (p.3). Ozdemir et al. (2013) also found no signs of toxic substances in the 15 studied cases (2000–2010) of victims of honor killings (p.200).

United Kingdom

Data on homicide in the United Kingdom is published separately for (1) Northern Ireland, (2) England and Wales and (3) Scotland. Similarly, also most research literatures focuses on these sub-national geographical regions separately. An exception is the *Murder in Britain* study, conducted by Dobash and Dobash (2015), which is currently the most in-depth and comprehensive study on homicide in the United Kingdom. The study focuses on murder cases (no manslaughter cases are included) in England, Wales, and Scotland. In terms of male-male homicides, the authors found that 19 per cent of the perpetrators was under the influence of drugs during the homicide. In the case of intimate partner murder, this is 8 per cent.

Northern Ireland

In the case of Northern Ireland, the Northern Ireland Statistics and Research Agency (NISRA) annually publishes cause-of-death statistics (e.g. see NISRA, n.d.), while statistics on crime and justice are published by the Analytical Service Group (ASG) of the Department of Justice, the Northern Ireland Courts and Tribunals Service (NICTS) and the Police Service of Northern Ireland (PSNI). Crime statistics on homicide are prepared by the latter (e.g. see PSNI, n.d.). Specific information on DRH is however not compiled or readily available from PSNI records (G. Hunter, personal communication, 17 February 2017). Similarly, the small body of research literature on homicide in Northern Ireland does not address the topic of DRH.

England and Wales

Crime statistics in England and Wales are published in quarterly *Crime in England and Wales* statistical bulletins (ONS, n.d.-a). These bulletins were published by the Home Office until 2011, after which this responsibility was transferred to the Office for National Statistics (ONS), which has been publishing the bulletin since April 2012. These bulletins present crime statistics based on both police recorded crime and results of the Crime Survey for England and Wales (CSEW). The CSEW is a face-to-face victimization survey and for obvious reasons does not cover homicide. The police recorded data does cover homicide, but the presented figures do not provide information on DRH.

Data on drug-related homicide was first published in the February 2016 publication of the annual ONS compendium *Focus on violent crimes and sexual offences* (ONS, n.d.-b; ONS, 2016). The homicide chapter in this 2016 compendium is currently the only available open source on DRH in England and Wales. The DRH data covers the combined years ending March 2013 to March 2015, and contains figures on homicide suspects being intoxicated at the time of the homicide, homicide suspects motivated by the aim to obtain drugs or to steal drug proceeds, and offenses in which perpetrator and victim were either both drug dealers or drug users. In terms of psychopharmacological violence, the data shows that 10 per cent of all homicide suspects was under the influence of both drugs and alcohol, while 4 per cent was intoxicated by drugs only. Regarding homicide victims, these percentages are respectively 7 and 3 per cent. In terms of economic-compulsive violence, the report shows that 3 per cent of the homicide were committed by the offender to obtain drugs. Another 3 per cent was committed to steal drug proceeds. Finally, regarding systemic violence, both offender and victim were drug dealers in 13 per cent of the homicide cases. In 4 per cent of the homicide offences, the offender and victim were both drug users.

This data stems from the Homicide Index, which is maintained by the Home Office. The Home Office Homicide Index contains detailed record-level information about each homicide recorded by the police in England and Wales. It is continually updated with revised information from the police and the courts and, as such, is a richer source of homicide data than the main

recorded crime dataset (ONS, 2016). The data on the relationship between homicide and drugs has been collected by the Home Office since April 2007 and on a voluntary basis. Consequently, the number of missing fields is rather high. Data from April 2011 onwards is more robust. After identifying these DRH statistics as a potential interest to the EMCDDA in 2016, the Home Office added the statistics to the February 2016 compendium on violent crimes and sexual offenses. Due to small numbers and volatility in the data, the ONS has opted to only publish data on drug-related homicide every three years. The first upcoming violent crimes and sexual offenses compendium that will contain DRH data is scheduled for February 2019, and will cover the period from ending March 2015 to March 2018 (D. Lader, personal communication, 20 February 2017).

Homicide in England and Wales has undergone “relatively little rigorous study by criminologists” for some significant time (Brookman, 2005:vi). However, the academic interest in the topic has increased. Post-2000 studies on homicide in England and Wales have focused on homicide rates after the 9/11 attack (e.g. see Salib, 2003), homicide due to mental disorder (e.g. see Large et al., 2008), infanticide (e.g. see Brookman & Nolan, 2006), homicide followed by suicide (e.g. see Flynn et al., 2009) the epidemiology of homicide (e.g. see Shaw et al., 2005; Soothill & Francis, 2012), and homicide from a legal perspective (e.g. see Blom-Cooper & Morris, 2004). Several studies also focused on the role of drugs (and alcohol) in homicide, although these studies mainly focused on a pre-2000 timeframe. For instance, Shaw et al. (2006) analyzed psychiatric reports prepared for the court in homicide convictions between 1996 and 1999. The authors found that drugs played a major role in one per cent and a minor role in fourteen per cent of the homicides. Furthermore, in the twelve months before the homicide, 40 per cent of the suspects was using drugs (p. 1119).

Scotland

In Scotland, crime and justice statistics are published by the Scottish government. The annual *Recorded crime in Scotland* report contains combined data of a broad ‘homicide etc.’ category (e.g. see Scottish Government, 2015a). This category includes non-prototypical homicide cases such as causing death by dangerous driving and corporate homicide. The recorded crime report does not contain any DRH data. In addition, the government annually publishes a *Homicide in Scotland* report (e.g. see Scottish Government, 2015). These reports are based on the Scottish Homicide Database, which is maintained by the Scottish Police. The annual reports solely focus on murder and culpable homicide crimes²⁵ and cover the homicide-drug relationship. The report makes a distinction between ‘drug status’ and ‘drug-related motive’. The former contains figures on suspected perpetrator and victim being under the influence of drugs at the time of the homicide. The latter refers to

homicide motivated by a need to obtain drugs or money for drugs, a homicide of a consumer or supplier of drugs, a homicide committed in order to steal proceeds of the drugs trade or a homicide as a consequence of rivalry between users and/or dealers within the drugs trade (Scottish Government, 2015b:22).

As such, the homicide reports contain data on all three elements from Goldstein’s tripartite framework – psychopharmacological violence, economic-compulsive violence and systemic violence – yet the latter two are combined and cannot be disentangled (M. Bell, personal communication, 22 February 2017). DRH data published in these reports is presented in Table 6.

Table 6: Drug-related homicide in Scotland (Scottish Government, 2001-2016)

Year	Suspect intoxicated by...	Victims economic-compulsive/systemic homicide
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²⁵ And thus excludes cases of causing death by dangerous or careless driving, causing death by careless driving while under the influence of drink or drugs, and illegal driver involved in a fatal accident.

	<i>Drugs only (%)</i>	<i>Drugs and alcohol (%)</i>	<i>Persons</i>	<i>%</i>
2000	13	9	11	10
2001	6	8	11	10
2002	10	15	18	14
2003	16	10	12	11
2004-2005 ²⁶	15	10	11	8
2005-2006	9	15	17	18
2006-2007	8	9	22	18
2007-2008	9	14	17	15
2008-2009	5	6	12	13
2009-2010	4	12	7	9
2010-2011	7	20	N.A.	N.A.
2011-2012	4	6	8	9
2012-2013	5	2	10	16
2013-2014	2	8	5	13
2014-2015	3	21	2	3
2015-2016	0	9	7	12

This data stems from individual level data returns which are electronically submitted by Scottish police forces on an annual basis, containing details of each case that has initially been recorded as homicide (Scottish Government, n.d.).

In terms of research literature, there is a considerable body of literature on homicide in Scotland in a pre-2000 era. The body of research output covering a more recent period is smaller, but provides for relevant insights into social patterning of homicide in Scotland (Leyland & Dundas, 2017), Glasgow (Lynch and Black, 2008) and the Lothian and Borders region (Kidd et al., 2013). Several studies have focused specifically on homicide involving knives and other sharp objects (e.g. Leyland, 2006; Kidd et al., 2013) and honor crime and honor killings of women (e.g. see Khan, 2007). Some studies touch upon the issue of drug-related homicide, yet they provide no empirical data on drug-related homicide in Scotland.

Summary

Publicly available data on drug-related homicides in European countries is scarce. Such offences are either approached through a public health lens – and hence, included in cause-of-death statistics – or through a criminal justice lens – and consequently included in crime and justice statistics. Based on the overview provided in this chapter, it becomes apparent that only few open and (semi-)closed data sources on drug-related homicide exist within the selected European countries.

Among the European national statistical offices, only Statistics Finland and the British Office for National Statistics (only for England and Wales) publish statistical data on DRH. Furthermore, also the German Federal Criminal Police Office, the Norwegian Police, the Slovak Police and the Scottish government publish some type of drug-related homicide data. Some of this data stems from homicide monitoring systems. Regarding these systems, data on DRH is collected in the context of the Dutch Homicide Monitor, the Finnish Homicide Monitor, the Scottish Homicide Monitor, the Homicide Index in England and Wales, the Kripas homicide monitor in Norway, the database on lethal violence in Sweden by the National Council for Crime Prevention, and two homicide databases in Denmark. In terms of research literature, homicide did not spark scholarly interest in most of the studied countries.²⁷ Furthermore, most of the body of literature on homicide in the studied European countries does not address the issue of drug-related homicide. There are however several studies that

²⁶ Scottish statistical bulletins in the criminal justice series have been changed to present information on a financial year basis. A financial year in Scotland (and the UK as a whole) runs from 1 April to 31 March.

²⁷ It is worth noting that, in addition to the research literature discussed in this chapter, there is a considerable body of homicide literature that focuses on a pre-2000 period or – especially regarding the link between psychoactive substances and homicide – on non-EU countries (mainly the US). Given the scope of this study, this literature is not discussed. E.g. see Darke (2010) for an overview.

provide insight on DRH, predominantly on drug use by the offender and/or perpetrator (i.e. psychopharmacological violence). This is for instance the case in England and Wales, The Netherlands, Spain, Sweden, and Turkey.

All in all, data on drug-related homicide is scarce and most of the available data concerns psychopharmacological DRH. Data on economic-compulsive and systemic DRH seems especially rare. The general absence of national open and closed/semi-closed sources on DRH is not to say that countries refrain from recording information on DRH. As indicated by the analysis, information might be recorded in court or police files. Such information might however oftentimes not be processed into statistics or disclosed for research or monitoring purposes.

4. International data sources

Overview

This second part of the analyses focuses on international homicide data sources. Such sources are compiled by information requests and drawing from data sources on the national level. An overview of the main international data sources on homicide is presented in Table 7.

Table 7: Overview of international homicide data sources.²⁸

Data source	Nr. of countries	EMCDDA reporting countries coverage		Availability	Drug-related homicide		
		Nr	Countries		I	II	III
Balkan Homicide Study	6	2	Croatia, Turkey	Closed/ semi-closed			
European Homicide Monitor (EHM)	3	3	Finland, Netherlands, Sweden	Closed/ semi-closed			
Comparative Homicide Time Series (CHTS)	190+	30	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom	Closed/ semi-closed			
European Sourcebook of Crime and Criminal Justice (ESB)	39	25	Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom	Open			
EUROSTAT	39	30	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom	Open			
Lithuanian Information Technology and Communication Department	3	3	Estonia, Latvia, Lithuania	Open			
United Nations Office on Drugs and Crime (UNODC)	200+	30	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom	Open			
World Health Organization (WHO)	140	30	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom	Open			

²⁸ Excluded from this table are data sources that solely draw from one single other source. For instance, a number of national statistical offices also publishes international crime statistics solely based on EUROSTAT.

Regional analyses

European and global level

As reflected in Table 6, data on homicide on the European (or global) level is compiled by the European Sourcebook Group, EUROSTAT, the UNODC, and the WHO, and the Finnish Research Institute of Legal Policy.²⁹

European Sourcebook on Crime and Justice

Currently in its fifth edition, the European Sourcebook on Crime and Justice (ESB) is the most comprehensive collection of data available on crime and criminal justice in Europe. The European Sourcebook Group prepares regular reports, which currently provide data on the period 1995 - 2011. These reports contain homicide data in the areas of police registered crime, cause-of-death statistics, the number of offenders, cases brought before court, the number of persons convicted, and received sanctions. Furthermore, these statistics also contain data on the involvement of firearms, women, and minors. In addition to these reports, the raw data is published as well. The European Sourcebook Group does not publish on the issue of drug-related homicide.

EUROSTAT

EUROSTAT is the statistical office of the European Union. It receives data on a variety of topics from the Member States and is responsible for consolidating this data and ensuring comparability (EUROSTAT, n.d.-a). In the area of crime and criminal justice, this data is collected through joint EUROSTAT-UNODC data collection across the EU countries (the UN-CTS, see above) and by additional data requests by EUROSTAT. The consolidated statistics on crime and criminal justice statistics are made available at country level for European Union Member States, EFTA countries, EU Candidate countries, and EU Potential Candidates (EUROSTAT, n.d.-b). EUROSTAT's homicide data includes statistics on recorded homicide offenses, suspected persons by gender, prosecuted persons by gender, convicted persons by gender, victims by gender, the victim-offender relationship and the homicide count in large cities (EUROSTAT, n.d.-c). EUROSTAT also maintains data series on causes of death. Data is prepared on a shortlist of 86 causes of death based on the ICD, which includes deaths caused by homicide/assault. In addition, cause-of-death statistics can be specified according to sex, age and geographical region (ibid). Neither these cause-of-death statistics nor the crime and criminal justice statistics contain data on drug-related homicide.

United Nations Office on Drugs and Crime

The UNODC is tasked with producing and disseminating statistics on drugs, crime and criminal justice at the international level. This data mainly stems from national statistical systems of the over 200 reporting countries. In the case of crime and criminal justice statistics, this is mainly supplied through the annual United Nations Survey on Crime Trends and Operations of Criminal Justice Systems (UN-CTS) – partly in cooperation with EUROSTAT (see below). Additional data might be acquired directly from national statistical offices, ministries or police departments, or via international data sources such as EUROSTAT or the WHO. This data is processed to increase data comparability and to produce regional and global estimates (UNODC, n.d.). On homicide specifically, the UNODC maintains various datasets. These datasets contain data on for instance the annual homicide counts, the number of victims, the modus operandi (mechanism) and the number of persons convicted. Data from these databases has been used for the UNODC's *Global study on homicide* (2012; 2014). The UNODC databases and reports do not contain data on drug-related homicide. The *Global*

²⁹ Interpol also published crime statistics, and was previously considered one of the main sources on homicide. However, Interpol stopped publishing statistics in 2006 (Interpol, 2006).

study on homicide briefly refers to other studies that address the role of drugs in homicide, but mainly from a theoretical perspective. Some statistics on Finland and Sweden are provided in support of this relationship, which are drawn from the European Homicide Monitor (see below).

World Health Organization

The WHO annually receives data on causes of death from national statistical authorities. This data is, after having verified that the submitted data is coded in accordance with the ICD, added to the WHO Mortality Database (WHO, n.d.). This database contains the number of deaths and age-standardized death rates by country, year, sex, age and cause. By using the Cause of Death Query Online (CoDQL) tool, users can extract data on specific homicide related causes of death (ICD-10 codes X85 to Y09). Underlying raw data is also published by the WHO. Aside from data on assault by drugs or medicaments (X85), the database provides no information on drug-related homicide.

Comparative Homicide Time Series (CHTS)

The CHTS is a dataset maintained by the Institute of Criminology and Legal Policy in Helsinki. The dataset is based on Public Health and Criminal Justice sources, which are (in the case of European countries) primarily drawn from a number of earlier discussed open sources: the WHO Mortality Database, the UNODC datasets, and statistics prepared by national statistical offices. The dataset is under constant development, and contains information on annual homicide rates and numbers of over 190 independent countries, 40 self-governing regions, and 15 historical administrative entities (Lehti, 2013). Based on this time series, Lappi-Seppälä and Lehti (2014) conducted a cross-national study on global homicide trends. This study touches upon the role of drug markets in homicide, but contains no empirical data on this topic.

Further insights on the European level

A number of studies on international homicide draw from the European data sources as outlined above. For instance, the ANAMORT project (Analysis of injury related mortality in European Union countries) resulted in a bibliographic database on mortality, based on statistics compiled by EUROSTAT (see Institut de veile sanitaire, n.d.). Moreover, Marshall and Summers (2012) analyzed trends in homicide in Europe between 1990 and 2008 by drawing from the ESB, UNODC database, WHO database, and related publications. Aebi and Linde (2012) assessed regional variation of homicide rates across Europe based on data from the WHO, the ESB, EUROSTAT and the UNODC. More recently, Aebi and Linde (2014) analyzed rates and correlates of homicide in 15 West European countries from 1960 to 2010 based on WHO and EUROSTAT data. Furthermore, Cole and Gramajo (2009) aimed to explain cross-country, cross-sectional variation in homicide rates in a large sample of countries, including a selection of countries across Europe. Other research literature focused on specific relationships, such as inequality and homicide (Elgar & Aitken, 2011; Stickely et al., 2012), gun ownership and violent deaths (Duquet and Van Alstein (2015), and social welfare support and homicide (McCall & Brauer, 2014). Other studies on European homicide zoomed in on a city level, such as McCall and Nieuwbeerta's (2007) analysis of homicide rates in 117 large- and medium-sized cities within Europe, based on homicide data from EUROSTAT. However, as the international data sources do not contain data on DRH, neither do the studies, which rely on these sources for data.³⁰

Northern and Western Europe and sub regions

Within Northern and Western Europe, there are no data sources that address these regions as a whole. Instead, two data sources on homicide address a smaller cluster of countries: the European

³⁰ This is not the case for the alcohol-homicide link. E.g. see Rossow (2001).

Homicide Monitor, currently containing information on Finland, the Netherlands, and Sweden, and the Lithuanian Information Technology and Communications Department, which collects and publishes homicide data on the Baltic states. In addition, several studies have been conducted on homicide in the wider Northern and Western European region.

The European Homicide Monitor

The creation of the European Homicide Monitor (EHM) was the result of a pilot study by the Swedish National Council for Crime Prevention (Brå), the then-called National Research Institute of Legal Policy of the University of Helsinki (now called the Institute of Criminology and Legal Policy) and Leiden University on the epidemiology of homicides in Finland, the Netherlands and Sweden between 2003 and 2006. The EHM database combines data from the Finnish Homicide Monitoring System, the Dutch Homicide Monitor, and the Swedish Brå homicide database.³¹ After the pilot, the EHM database has been growing in both geographical scope and years on which data is collected. Countries in the process of joining include Denmark, Estonia, Italy, Norway, and Switzerland. However, so far, data is only published on the years 2003-2006 (Granath et al., 2011; Liem et al., 2013).

The EHM consists of 85 variables and includes characteristics of the incident, the victim, and the perpetrator. More specifically, the monitor contains data on the number of persons involved, the modus operandi, the location, the victim-perpetrator relationship, the total number of victims, the victim's sex, the victim's age, as well as on the role of alcohol and drugs. Regarding the latter, the EHM includes statistics on whether the victims and perpetrators had been drinking alcohol or taken drugs at the time of the homicide, as well as data on alcohol and substance abuse (Granath et al., 2011:64-67; Liem et al., 2013:81). However, this data on DRH is currently provided on Finland and Sweden only.³²

Lithuanian Information Technology and Communications Department

The Information Technology and Communications Department (ITCD) under the Lithuanian Ministry of Interior exchanges crime statistics with the Latvian Information Center and the Estonian Ministry of Justice. The ITCD combines these statistics on crime and quarterly publishes a report on crime in the Baltic States (see ITCD, n.d.). These reports present data on the number of registered homicide cases, which are broken down into non-intentional homicide, murder, attempted murder and infanticide. The tables also include specifics on gender, use of firearms and crimes committed by an intoxicated person. These homicides are not specified by type of crime, but relate to the total number of criminal offenses. With regards to intoxication, this information is provided for Lithuania only. As can also be derived from the previous section on national data sources, Lithuania is the only Baltic State that publishes statistics on this topic.

Further insights into Northern and Western Europe

Several studies have been conducted on homicide in Northern or Western Europe as a whole. For instance, Aebi and Linde (2010) analyzed the development of crime levels in Western Europe between 1990 and 2007. The authors used data from the European Sourcebook on Crime and Criminal Justice and (in case of missing data) from EUROSTAT and the UNODC. Regarding homicides, the study concludes "after an increase in the early 1990s, homicides followed a curvilinear but overall downward evolution until the beginning of the 2000s, when they started decreasing in a more steady way" (Aebi & Linde, 2010:262).

³¹ See previous chapter for more information on these national data sources.

³² The insights into DRH based on the FHMS and the Brå homicide database are presented in the previous chapter.

Other studies focused on homicide rates and trends in sub regions. For instance, Ceccato (2008) studied expressive crimes in Estonia, Latvia, and Lithuania from 1993 to 2000, and Kivivuori and Lehti (2011) examined homicide trends in Finland and Sweden. The latter provides data on the number of homicide offenders being under the influence of drugs during the crime. In the case of Sweden, this data is drawn from the Finnish Homicide Monitoring System, as discussed in the previous chapter. Based on this monitoring system, the authors find that between 2003 and 2007, 22 per cent of the homicide offenders were intoxicated by substances other than alcohol (p.170). Swedish data on drug use only covers the years between 1990 and 1998.³³

Finally, still other studies have combined data on specific subtypes of homicide, including alcohol-related homicide in Norway, Sweden, and Finland (Lehti and Kivivuori, 2005), child-on-child homicide in England and Norway (Green, 2007), and child homicide in Finland and Austria (Putkonen et al. (2009a; 2011)). Drawing data from Austrian and Finnish coroner reports, death certificates, and police reports, Putkonen et al. (2011) were able to address the drug-homicide link in their study on gender differences in filicide offense characteristics. The authors found that mothers who killed their child were under the influence of drugs³⁴ in 9 per cent of the cases, while fathers were found to be intoxicated in 15 per cent of the cases (p.324).

Eastern and Southern Europe and sub regions

Data sources and research literature on homicide in (regions within) Eastern and Southern Europe are more scarce as compared to data on homicide in Northern and Western Europe. The key homicide source (in development) is the Balkan Homicide Study.

The Balkan Homicide Study

The Balkan Homicide Study is a research project that started in 2016, and aims to provide insights into the social and legal construction and phenomenology of homicide in the Balkans. The project focuses on six states: Albania, Bosnia and Herzegovina, Croatia, Macedonia, Serbia and Turkey. For these six countries, the Max Planck Partner Group for Balkan Criminology (MPPG) analyses homicide and attempted homicide cases through examination of national samples of prosecution and court cases for the years 2012, 2013 and 2014. These sources should provide insight into the characteristics of victims, the characteristics of offenders, their relationships, situational circumstances, possible connections of the offences with illegal markets and organised crime and criminal procedure issues. The study is designed as a pilot study, which in the long run could be applied in all BCNet³⁵ partner countries.

Further insights into Southern and Eastern Europe

Studies on crime rates in Eastern Europe are rather scarce (Piatkowska et al., 2016). Rather than looking at multiple countries over a longer period of time, these studies tend to zero in on specific countries (Stamatel, 2008b). Against this backdrop, much of the homicide literature in Eastern Europe focused on post-communist Russia (Stamatel, 2009). A small body of literature focused on a wider region. For instance, Piatkowska et al. (2016) analyzed the impact of accession to the EU on homicide rates in eastern Europe, Stamatel (2008a; 2008b; 2009) conducted research on homicide rates in Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia and several non-EU countries by using homicide data from the WHO and the European Sourcebook on Crime and Criminal Justice, and Favarin (2014) used UNODC homicide data to study the effects of

³³ In which 13 per cent of the homicide offenders and 8 per cent of the homicide victims was under the influence of drugs during the crime.

³⁴ Drugs only or drugs in combination with alcohol.

³⁵ The Balkan Criminology Network; a network of researchers and scholars with particular interest and expertise in the field of crime research and criminology in the Balkans.

democracy on homicide rates in the Balkans, Bulgaria, and Romania.³⁶ These studies do not touch upon the association between psychoactive substances and violence. Previous time series studies that address this link have mostly been confined to Western European countries and North America. Consequently, there is sparse knowledge about this relationship in other regions (Bye, 2008). Furthermore, the studies that have been conducted on psychoactive substances and violence mainly focus alcohol-related violence. For instance, Bye (2008) studied alcohol and homicide in six eastern European countries based on homicide statistics compiled by the WHO and alcohol-related statistics from a number of different national and international sources. No similar studies have been conducted on the drug-homicide nexus in either Southern or Eastern Europe.

Summary

Currently, there appears to be no overall, standardized European-level data set available that systematically gathers information on the various types of drug-related homicide. Most international data sources draw data from cause-of-death statistics or crime and justice statistics prepared by national statistical authorities. As the previous chapter pointed out, most of these national statistical authorities do not collect or process statistics on drug-related homicide. It is therefore not surprising that most international data sources on homicide do not provide insight in the phenomenon of drug-related homicide. The exception is the European Homicide Monitor, which currently appears to be the only source of systematically collected data where a relationship is documented between a homicide event and whether the perpetrator was a drug abuser or intoxicated during the crime. Currently, the EHM's data is rather time-limited and the number of reported countries fairly low. However, both the period on which data is collected and the geographical scope are increasing. A second noteworthy project that is under development is the Balkan Homicide Study, which aims to examine national samples of prosecution and court cases. What these two projects have in common is that they are based on primary sources such as police files and prosecution files, rather than readily available national crime and justice statistics or cause-of-death statistics.

Most other studies provide little additional insight on DRH. These studies tend to rely on data from the above-identified international data sources that do not contain data on DRH. On a final note, based on the overview above, it appears that relatively few studies address homicide in an international context. However, it should be mentioned that there is in fact a considerable body of literature of cross-national homicide studies (e.g. see Trent & Pridmore, 2011:112-126 for a partial overview). However, these studies predominantly contain pre-2000 data on homicide and therefore fall outside the scope of this study. Within the post-2000 body of literature, for reasons mentioned above, most studies on violent crime in an international context do not touch upon the issue of drug-related homicide.

³⁶ Furthermore, Cyprus studied as part of a study on suicide-homicide ratios in the Eastern Mediterranean Region. Results are, however, not presented for each country individually (see: Rezaeian, 2008).

5. Conclusions

This final section will reflect on the study's findings. First, a summary will be presented on existing data sources on DRH and the extent of drug involvement in national homicides. Then, several obstacles/weaknesses will be identified that hamper the monitoring of DRH. This is followed by a brief discussion of insights from non-EU monitoring systems regarding potential ways to tackle these obstacles. Taking all the previous sections into account, the chapter will conclude with proposing several recommendations aimed towards monitoring drug-related homicide in the EU, Norway, and Turkey.

Findings

Data sources on drug-related homicide

The study identified several types of homicide data sources. Of these sources, the (semi-)closed homicide monitoring systems tend to be the most comprehensive homicide data sources available, as they usually cover the most key features and circumstances. Several open source homicide specific reports are based on these homicide monitors, yet these reports not always cover the full spectrum of the monitor (e.g. variables left out, presenting averages over multiple years rather than annual values). The more general open-source cause-of-death statistics and crime and justice statistics are usually more basic, covering less detailed info and/or less key features. Still, cause-of-death statistics do address the modus operandi rather extensively (see annex B), although for this level of data, oftentimes a query for data is required.

To date, there are a number of such data sources available on the Member State level to monitor drug-related homicide. Statistics on this topic are annually prepared by the German Federal Criminal Police Office, the Norwegian Police, the Slovak Police, and Statistics Finland. Furthermore, drug-related homicide statistics are annually published by the the Scottish government. The British Office for National Statistics (England and Wales) has opted to publish DRH statistics every three years (combined figures of the preceding three years). In addition to the aforementioned, England and Wales, Denmark, Finland, the Netherlands, Norway, Scotland, and Sweden maintain (semi-)closed monitoring systems on homicide that contain DRH data. Although these are (semi-)closed sources, some data from these monitors can be extracted from the above-mentioned periodical publications or from research literature conducted by the persons or institutions maintaining these systems. Additional research literature based on police reports or autopsy reports provides further empirical insights into drug use by homicide victims and, to a lesser extent, drug use by homicide offenders, although only for a selected number of European countries. Ultimately, although all studied countries prepare homicide statistics (from both a Public Health and Criminal perspective), only a small part of the 30 studied European countries prepare data on drug-related homicide. This does not necessarily mean that the vast majority of countries does not document any DRH data. As shown in the analysis, information on DRH might for instance be documented in police files and is subsequently not processed into statistics or made available for research purposes.

Currently, given the scarcity of DRH data in European countries, there is no overall, standardized European-wide data set available that systematically gathers information on the various types of DRH. Data used for international data sources, such as EUROSTAT, WHO, UNODC, and the European Sourcebook on Crime and Criminal Justice, is provided by national statistical authorities. However, as shown above, most countries do not prepare data on drug-related homicide. Consequently, most international data sources do not contain any DRH data. In this regard, an important step has been taken by the creation of the European Homicide Monitor. The EHM currently appears to be the only international source of systematically collected data where a

relationship is documented between a homicide event and whether the perpetrator was under the influence of alcohol or drugs during the homicide. Currently, the EHM's publicly available data is rather time-limited and the number of reported countries fairly low. However, the EHM is currently being expanded.

Extent of drug involvement in national homicides

Given the limited sources that document on drug-related homicide, knowledge on DRH is limited to mere slivers of insight. Most of the scarcely available data concerns psychopharmacological violence.

The available figures on homicide offenders and drug use show differences between Member States as well as strong fluctuations within certain countries. Exemplifying the latter, the small absolute figures of homicide offenders in Norway being intoxicated³⁷ can constitute percentages ranging between 8 (2015) and 40 (2006) per cent. Similarly, data on Scotland is also fluctuant, with the number of homicide offenders having used drugs before the crime ranging between 7 (2012-2013) and 27 (2000-2011) per cent. On average, 18 per cent of the homicide suspects in Scotland between 2000 and 2015 was intoxicated by drugs during the crime. This is more or less similar to Finland and Sweden (2003-2006). Figures are lower for England and Wales (14 per cent, 2013-2015), the Netherlands (7 per cent, 1994-2004), and Slovakia (annual number of homicide drug-intoxicated homicide offenders between 2000 and 2015 never exceeds 3). Germany is notable for showing a steady trend of an annual 10 per cent of the homicide offenders being hard drugs users (2000-2015). These figures are much higher in Finland and Sweden (2003-2006). Available figures on drug use by homicide victims shows an equally varied picture, with some sources illustrating high levels of drug use among victims (e.g. in the case of Finland and Sweden), while other sources, such as studies focused on Turkey and Greece, show no signs of drug use among homicide victims at all.

Even less is known about economic-compulsive homicide and systemic homicide. Data on homicide in Scotland contains figures of a combined category of economic-compulsive and/or systemic homicide. These figures can however not be specified further. Regarding economic-compulsive violence, several countries produce statistics on the number of homicides committed for theft. However, usually the type of goods that the offender stole or intended to steal are not specified. Figures on economic-compulsive homicide are currently only available for England and Wales between 2013 and 2015. During that period, 3 per cent of the homicide cases were committed by the offender to obtain drugs. Another 3 per cent was committed to steal drug proceeds. In terms of systemic violence, some figures are available on England and Wales, the Netherlands, and France (Paris), showing that respectively 17 (2013-2015), 10 (2003), and 4 (2007-2013) per cent of the homicide cases are linked to the drug market.

Discussion

Obstacles

Three obstacles can be identified based on the analysis presented above. First, there is a clear impediment in terms of missing data on drug-related homicide. Although homicide in itself is relatively easy to document (and hence has relatively few dark numbers), assessing whether a homicide is drug-related require through one of the three mechanisms requires knowledge that is more difficult to obtain. In order to determine whether there is a direct relation between drug use and homicide (i.e. psychopharmacological violence), it is required that drug use by the offender is established and registered by the police, and that drug use by the victim is established and documented in autopsy reports. Especially the former is not always possible. It is however even more difficult to determine whether a homicide is committed to support one's costly drug use (i.e. economic-compulsive violence). This requires identifying an offender as well as more information on

³⁷ By drugs, medication, or a combination of substances.

the motive for the crime. Finally, assessing whether a homicide is related to the drug market (i.e. systemic violence) requires identifying the offender and the victim, as well as clarity on the milieu in which the homicide was committed. This means that, especially in the case of economic-compulsive and systemic violence, determining whether a homicide is drug-related is rather complex. At times, statistics are presented on homicides being related to theft and homicides being related to gangs or organised crime. However, in these cases, no data is available on whether this involved drugs or organisations operating in the drug market. Finally, it is worth noting that at times information on DRH might be recorded in police files or registered in police systems, but not processed in statistics.

A second obstacle constitutes the fragmented nature of homicide data within countries. As shown, homicide data can be extracted from various sources. Police data is processed into police statistics, while autopsy reports are used to prepare cause-of-death statistics. The various types of statistics, however, are generally not pooled together. This results in a fragmented documentation. As the different types of homicide statistics are prepared in different ways, there is some degree of mismatch. For instance, several studies have shown that cause-of-death statistics are generally lower than police statistics. Fragmentation is exacerbated as homicide data availability and detail can differ between geographical levels. For instance, detailed statistics on causes of death in Turkey are only available on the provincial level. On the national level, Turkish cause-of-death statistics are less detailed and only available since 2009.

Finally, the analysis shows obstacles in terms of cross-national comparability. Countries differ in what they consider to be a 'homicide'. Although there tends to be overall consensus on what is considered a 'regular' intentional homicide, there are, however several types of homicide on which there is less consensus on whether or not they should be comprised under the label homicide (see also Smit et al., 2012:8; Marshall & Block, 2004). These non-prototypical homicides include abortion, assisted suicide, euthanasia, infanticide, assault leading to death, dangerous driving, and justified killing. The extent in which European countries include non-prototypical homicides in the national definitions of homicide differs between countries. At times (if included in the national definition of homicide), data on these types of homicides is separately available. In other instances, this is not the case.³⁸ A related issue concerns the inclusion or exclusion of attempted homicides – and consequently the inclusion or exclusion of attempted homicide in crime statistics. Again, among the countries that do include attempted homicides in national statistics, some countries provide separate statistics on completed and attempted homicide, while others do not. A final issue in terms of comparability arises when looking at the type of statistics produced (i.e. the unit of analysis and the counting units). Data can contain information on the perpetrator, victim, and/or event. Even in cases where different countries provide data on the same unit of analysis, comparability issues might arise. For instance, Slovakia prepares figures on the number of homicide cases in which the offender was under the influence of drugs. England and Wales, among others, publish data on the number of perpetrators that committed a homicide whilst intoxicated by drugs. Other countries, such as Germany, prepare data on homicide offenders being known drug users. Although these different counting units all focus on the perpetrator and provide insight in psychopharmacological violence, these data are not directly comparable.

Lessons that can learned from other monitoring systems

This section briefly zooms in on non-European homicide monitoring systems, as these might provide valuable insights in terms of tackling the above-identified obstacles. This section will discuss several

³⁸ Regarding these differences in definitions and concepts, the UNODC is currently coordinating a project to implement a classification standard for crime on the national level. This standard – the International Classification of Crime for Statistical Purposes (ICCS) – places emphasis on the study of intentional homicide and includes additional disaggregating variables, such as offender and perpetrator characteristics, the modus operandi, and the motive (UNODC, 2015).

homicide monitoring systems in the US and Australia. In the US, Homicide from a public health lens is monitored through Fatal Injury Reports. These are developed from the National Vital Statistics System (NVSS), which is maintained by the Centers for Disease Control and Prevention (CDC). In turn, the NVSS mortality data stems from standardized death certificates filed throughout the US (BJS, 2014). The CDC also maintains the National Violent Death Reporting System (NVDRS, see CDC, 2016). In 2002, US Congress appropriated funding for the CDC to develop and implement this monitoring system in six states. Currently, 40 US states, the District of Columbia, and Puerto Rico are participating in this monitoring system that collects data on all types of violent deaths. Cases are categorized into five manners of death: suicide, homicide, unintentional firearm, undetermined intent, and legal intervention. For each death, the NVDRS collects approximately 300 unique variables, depending on the content and completeness of the source documents for each case (Lyons et al., 2016). Source documents are death certificates and crime reports. Information is also obtained from coroners.

From a criminal justice lens, three more US homicide monitoring systems can be identified. On the local level, a study into homicide in Chicago resulted in the creation of the Chicago Homicide Dataset (CHD, see: NACJD, n.d.-a; NACJD, n.d.-b; Block et al., 2005). The dataset contains a number of offender and victim variables, including cause and motivation of the crime and whether the crime involved drugs or gangs. This data is collected on all homicide case files of the Chicago Police Department between 1965 and 1995. On the national level, homicide is monitored through the FBI's Supplementary Homicide Reports (SHR) and the National Incident Based Reporting System (NIBRS). Both are part of the Uniform Crime Reporting Program (UCR). The UCR provides aggregate annual counts of the number of homicides occurring in the US. The SHR data provides additional and more detailed information about each homicide. This includes information on victim and offender demographic characteristics, the modus operandi, the circumstances surrounding the incident (e.g., argument, robbery, gang-related), and the relationship between the victim and offender (BJS, 2014). The NIBRS is a more broader crime incident-based reporting system through which data is collected on each single crime occurrence. This data stems from local, state, and Federal automated registration systems. For each crime, a variety of data is collected about the incident. This includes data on the nature and types of specific offenses in the incident, data on the characteristics of the victim and offender, information on types and value of property stolen and recovered (if applicable), and information on characteristics of persons arrested in connection to the crime (NACJD, n.d.-c). Homicide (i.e. murder, non-negligent manslaughter, negligent manslaughter, and justifiable homicide) is a distinct category of crime in NIBRS (FBI, n.d.).

Finally, in Australia, the National Homicide Monitoring Program (NHMP) has been established to monitor homicide (i.e. murder and manslaughter, excluding driving causing death) in Australia since 1990. The NHMP dataset contains 77 distinct variables and is the country's only national system with the capacity to monitor homicide rates and to facilitate detailed analysis of homicide types and trends (AIC, 2016).

The common denominator between these national systems is the use of one definition, one language, and the involvement of a single coordinating body. Furthermore, a number of these systems draws data from multiple sources. This applies especially to the NVDRS in the US and the NHMP in Australia. The former is the only US state-based surveillance (reporting) system that pools data on violent deaths from multiple sources. These sources include state and local medical examiner, coroner, law enforcement, toxicology, and vital statistics records (CDC, 2016). Similarly, the Australian NHMP draws data from offense records derived from each Australian state and territory police service, as well as state coronial records such as toxicology and post-mortem reports. Where necessary or appropriate, data is supplemented with information provided by police officers or by newspaper clippings (AIC, 2016). In contrast, the NIBRS, SHR and NVSS are based on a single source (either police reports or death certificates). However, in the US, coroners and medical

examiners often work closely with law enforcement on homicide cases. Consequently, there is generally agreement on the cause of death and victim information reported to the CDC and the FBI, because cases are investigated and documented through collaborative efforts and then reported through the NVSS and SHR (BJS, 2016). These four traits – one definition, one language, one coordinating body, and the use of multiple sources (or interdisciplinary collaboration) – can serve to tackle above discussed obstacles in terms of fragmentation and comparability.

Recommendations: Towards European-level monitoring

The status quo is characterised by a limited number of sources that document on DRH, and a majority of sources that do not contain any data on the relation between drugs and homicide, nor provide anchor points to assess this relation otherwise. Given this high level of missing data, identifying suitable proxy measures (in circumstances where available data are not possible to disaggregate) in order to directly assess the drug-homicide relationship is no feasible option. Therefore, addressing the issue of missing data, and with it several other identified obstacles, should be the primary priority in order to be able to monitor DRH on the European level. Against this backdrop, we present the following recommendations:

1. *Define and operationalize concepts*

European countries generally show a similar picture in terms of what is considered as a ‘regular’ intentional homicide. There is, however, less consensus to what extent non-prototypical homicides should be considered as homicide. Other identified differences between countries concern the inclusion or exclusion of attempted homicide in national statistics and the counting unit of prepared statistics. Although these raised points do not pose problems when analysing homicide or drug-related homicide on the national level, this clearly hampers cross-national comparisons (Smit et al., 2012:8). To address the issue of differential use of definitions, and hence to safeguard reliability and validity of an international homicide monitor, it is therefore essential to define and operationalize the concepts of homicide and drug-related homicide. This entails bringing about clarity on what is (and what is not) considered homicide, what is considered drug-related homicide, how drug-related homicide should be measured, and what type of DRH data should be prepared to ensure cross-national comparable data. The latter refers to variables, units of analysis, and counting units. These should be realistic and carefully defined.

2. *Assume the role of coordinating body*

Only a limited number of European countries has thus far been engaged in collecting data on drug-related homicide. To ensure that DRH data collection and processing is extrapolated to other European countries, it is recommended to coordinate this process on the European level. The coordinating body’s tasks will be to ensure DRH data collection and preparation throughout Europe – adhering to the adopted definition, operationalization, and counting units – and to track the progress of this process. This might entail creating a data processing and coding manual. Against this backdrop, the coordinating body should create and maintain a network of national statistical authorities. These national statistical authorities, in turn, will coordinate the preparation of DRH data on the national level.

3. *Establish a monitoring system*

To increase our understanding on DRH in Europe, the data prepared by national statistical authorities require structural monitoring on the European level – by the coordinating body. To structure this data collection process, this might require developing search terms and constructing an appropriate search string. To address the issue of fragmentation, this

monitoring should include multiple types of data sources. Combining different data sources is feasible and has the potential to result in a high-quality dataset, as shown by the NVDRS in the US, the NHMP in Australia, and the EHM in a cluster of countries in Europe. Regarding the latter example, important steps have been made by the European Homicide Research Group (EHRG).³⁹ In terms of monitoring homicide on an international level in Europe, the EHRG's European Homicide Monitor fills a long-existing lacuna when it comes to the comparability of homicides between European countries. Considering this groundwork and the EHRG's ambition to further expand the EHM, it seems worthwhile to cooperate with the EHRG to incorporate the different types of drug-related homicide into the European Homicide Monitor.

These recommendations will be further elaborated upon in the second part of this project; the implementation plan.

³⁹ For more information on the EHRG, see: <http://www.violenceresearchinitiative.org/ehrg.html>

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[t071POnPTXePpO5A--m6oLg5sdf-E7kXS1MXnAaiw00UwdINzdESi1z3SX0TGdcTS1I3aWkEZ-qzFjonXTfPmwGlrf7ZAXzn7kLa12yXMGbxSDynw-LPbWx8uCKbfcQh5V28nksdbJiCVuJ6Z7mc8TaqhMc-P06PxpGgq-TW3pOfDqVrmIqsf3pEN8Ll9S29h03S5Ny5gd4KmojxHK9RO9gAUXDLUVQdu7c7R0zarSxncRZMK9dFoSiYqCFL9du9RvxCTJ1UXLzcec1IPqF1HyEzQ9GJ1wTHjSztK_47e0NcxTR7tPkIdIvPQ3ngQdvoRknumkcgcx7MzYmsiI9KJLQDpV616uhex6oaVRMQILyDrOJvyALPDgMCzdAnkoILidCKp44Jg1OhsTRYTXduH8YXfms89pPl1GRljTNZWkynahS3MYKXYS9EQ3kBC51Kr4zk3ZAY68S0rn8Mhc0dJaS2Hcy7fpGNzHjz47mIdBYFRSwCJnpuMr5qHSNZIC2Ex1k9MRoGb5YtXCg5CeIsSAVJMd9HtGAWzL9UXE_mfyT-doj71M3tLm5EurrsVq56s1G-KH51xsA9W92RBC1_RKzTXNLYTRUHczCURNELzV8Zp5YEIj1Wypa7gs416p2lKcXaq_c1L9BX9RDNIUGaEEZDB8u9_5btIxr_-UJAqPCClnGzZlOcXESLV5Gh9hIGlxJi3lLRzNgpm0EhrKrR1V-BCT3rzEj1pqXb9hhYUYOZc9F3MAqtwdMEuOB027ZClz7m3xxvJMDmyDri15eq6yHETTFezPERis54xM5GfEpiKNYy5HwRON83VW1gFUWUSUpJQHY8JZeWbCx2nXVt6_a9IpW7SV2SSf23X_BwLAens/dl4/d5/L2dBISEvZ0FBIS9nQSEh/](https://slovak.statistics.sk/wps/portal/ext/themes/demography/justice/indicators/lut/p/b1/jZPZkqIwFIafpR_AIuzhMijLABEMBPWG_Ahdka5RBRJ9-6C5rLmaqcXIH-T7OT84Js2M2zO4z6fMs6fLmM6m-nndS7MsYzucsAICUAcAuCQGgBNiYG4HtCIAfFgJ_e5aAzhAnrG2BBYI4sufAL581UCmIDsAQMcQAUZmuFZ8nl8thJf_AwAQ_3_5Jwp8-cj3feJQCgzK6QDzrAHccPyGLr_8CeDL14nHIUUw1MV6NW4HKgeJI3EAsC9_ApJyDemNPwJT_29L_5z_X4Dwf-c3UWDKJL_8EZjy_Xf5feld_ojZTY3Y9wR9A1Mj_q7JkyWgw72AqSma7qPw.JsM4B67Z1EeGHD8Zi9llVZO0t5sCIfYLeG9sUt_DgvouyXpHOTnBsqUEyh4NNvhB4MWhW9bWRNfR2hXA8PooLt2xCOqbD81nj5BtaHIR16fntvs44PZjnHkn68VzwTMRqbWIYD4rnug7T1VSmu0nxVJbcwtbWcOZa8Oh6MQ1nzQps6vPO5YsEhxtTb5O4gO3fMlOXIbFH0lr4O1TnwnMUqsm8kCWom3ZMvVUppHCvLOF03BnOh6g8FatrfdYU0FHBBeVIGSn5wUzWGAhsBZOaz1I0PgDteC5ou0bgYw7B-Jqd7aZa3pfOMuzp2PqIBVZ1me7-IgH-M0ChO3cwi2i1mkD0J0q47HvDcy7iHaGyWwZoFzZbWtUAHrXFwOTU6viS1O6N1TuDellecI2TGINfxpQijplH00-kju-Uqu7OuTsAs_SEqL1b8UqElbTKm4N3VW7j60fIN9Yv81TaTUDo2bJK4PduIS7cve9VeLspTzMX7qt9AitfyvObdDr17j4PDhsdan3o4VnTPDXQ5A-3R9m0RfWIKx3EWhws2f2jRVyWnpoIA9l8n07LKvbR2NxLHf5ZG5DjHM_mvYs-fgMqmZUZ/dl4/d5/L2dJOSEvUUt3QS80SmtFL1o2X1E3SThCQjFBMDg1NzAwSU5TVTAwVIMwS1My/) (Information was retrieved: 03/02/2017).

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Appendix A: List of contact persons

Table 8: List of contact persons⁴⁰

Country	Organization	Person
Austria	Ministry of the Interior/Bundeskriminalamt (Crim. Intel. Service)	A. Zehner
Belgium	Federal Police	D. Teunkens
Belgium	Federal Police (DJSOC Drugs)	M. Bruneau
Bulgaria	National Statistical Institute	A. Tetevenska
Croatia	Ministry of the Interior/Police	Anonymous
Cyprus	Statistical Service	G. Ioannou
Czech Republic	Czech Statistical Office	K. Kořenková
Czech Republic	National Monitoring Centre for Drugs and Drug Addiction	K. Grohmannová
Denmark	Denmark Statistics	L. Lavrsen
Denmark	Ministry of Justice	A. Boesen Pedersen
Estonia	Statistics Estonia	S. Tiitsmaa
Finland	University of Helsinki	M. Tanskanen
Finland	University of Helsinki	M. Lehti
France	Service Statistique Ministériel de la Sécurité Intérieure (SSMSI)	Anonymous
Germany	Bundeskriminalamt	K. Justen
Greece	Hellenic Police	T. Polyxeni
Hungary	Central Statistical Office	E. Pék
Ireland	Central Statistics Office	A. Murray
Italy	National Institute for Statistics (ISTAT)	L. Fabiano
Italy	Ministry of Interior (Central Bureau of Statistics)	E. Belli
Italy	EURES	A. Curti
Lithuania	Official Statistical Office/Ministry of Interior	D. Bikmanaitė
Luxembourg	Grand Ducal Police	Anonymous
Malta	National Statistical Office	G. Josianne
Netherlands	Statistics Netherlands	K. van der Ven
Norway	Norwegian Institute of Public Health	C. Lycke Ellingsen
Norway	Statistics Norway	R. Håset Drager
Poland	Central Statistical Office	H. Dabrowko
Portugal	Statistics Portugal	Anonymous
Portugal	Ministry of Justice	A. Mendes de Almeida
Romania	National Institute of Statistics	M. Radulescu
Slovakia	Ministry of the Interior/Police	S. Grófová
Spain	National Statistics Institute	M. Pilar Bernardo
Turkey	Turkish Statistical Institute	Anonymous
UK: England & Wales	Home Office	D. Lader
UK: Scotland	Scottish Government, Justice Analytical Services	M. Bell
UK: Northern Ireland	National Police (PSNI)	G. Hunter

⁴⁰ Note: the presented list only contains names of organizations and respondents that responded to our query.

Appendix B: ICD-10 homicide/assault codes

Table 9: ICD-10 codes X85 to Y09

Code	Cause of death
X85	Assault by drugs, medicaments and biological substances
X86	Assault by corrosive substance
X87	Assault by pesticides
X88	Assault by gasses and vapours
X89	Assault by other specified chemical or noxious substance
X90	Assault by unspecified chemical or noxious substance
X91	Assault by hanging, strangulation and suffocation
X92	Assault by drowning and submersion
X93	Assault by handgun discharge
X94	Assault by rifle, shotgun and larger firearm discharge
X95	Assault by other and unspecified firearm discharge
X96	Assault by explosive material
X97	Assault by smoke, fire and flames
X98	Assault by steam, hot vapours and hot objects
X99	Assault by sharp object
Y00	Assault by blunt object
Y01	Assault by pushing from high place
Y02	Assault by pushing or placing victim before moving object
Y03	Assault by crashing of motor vehicle
Y04	Assault by bodily force
Y05	Sexual assault by bodily force
Y06	Neglect and abandonment
Y07	Other maltreatment syndromes
Y08	Assault by other specified means
Y09	Assault by unspecified means

Appendix C: Overview of DRH sources and data

Table 10: Data sources and research literature

Country	DRH data availability	Years	Data	Source(s)	Type of source
Czech Republic	Psychopharmacological	2005-2015	Average of 2% of homicides committed under influence of drugs.	NMCD, on request	Police statistics
Denmark	Psychopharmacological	1983-2007	<i>Focus on Southern Denmark:</i> Average of 4% of victims under influence of drugs during crime.	Leth (2010)	Study, using police and autopsy reports
		2012-2016	<i>Currently in first stage of development</i>	Ministry of Justice	Homicide monitor (based on convictions)
Finland	Psychopharmacological	1995-2004	Average of 9% (male) and 3% (female) of offenders under influence of drugs during crime.	Häkkinen-Nyholm et al. (2009)	Study, using psychiatric and police reports
		1996-2002	<i>Focus on homicide by strangulation:</i> - Average of 14% of offenders diagnosed as drug dependent. - Average of 10% of offenders under the influence of drugs during crime.	Häkkinen (2007)	Study, using psychiatric reports
		2002-2006	- Average of 4% (male) and 0% (female) of offenders under influence of hard drugs during crime. - Average of 4% (male) and 0% (female) of victims under influence of hard drugs during crime	FHMS, EHM. See: Kivivuori et al. (2007); Granath et al. (2011)	Homicide monitor
		2003-2006	- Average of 22% (male) and 19% (female) of offenders under influence of drugs during crime. - Average of 16% (male) and 13% (female) of victims under influence of drugs during crime. - Average of 30% (male) and 12% (female) of offenders were drug abusers during crime. - Average of 19% (male) and 8% (female) of victims were drug abusers during crime.		
France	Systemic	2007-2013	Average of 4% of homicides (sample size = 485) resulted from a conflict between drug traffickers.	Scherr and Langlade (2014)	Study, using the CORAIL database (police statistics)
Germany	Psychopharmacological	2000-2015	Average of 8% of homicides committed by a drug user.	Fed. Crim. Police (2001-2016)	Police statistics
Greece	Psychopharmacological	1998-2013	<i>Focus on Epirus region:</i> No evidence for use of psychotropic drugs among homicide offenders.	Vougiouklakis & Tsiligianni (2006); Fragkouli et al. (2016)	Studies, using autopsy reports and court files
Ireland	Psychopharmacological	1972-1991	- Average of 47% of offenders under influence of drugs or alcohol during crime. - Average of 42% of victims under influence of drugs or alcohol during crime.	Dooley (1995)	Study, based on Garda crime files
		1992-1996	- Average of 47% of offenders under influence of drugs or alcohol during crime. - Average of 42% of victims under influence of drugs or alcohol during crime.	Dooley (2001)	Study, based on Garda crime files

Table 10: Data sources and research literature (continuation)

Country	DRH data availability	Years	Data	Source(s)	Type of source
Italy	Psychopharmacological	1982-2012	<i>Focus on Brescia County:</i> 60% of victims tested positively for substances, of which 40% for drugs (alone in combination with alcohol).	Verzeletti et al. (2014)	Study, using post-mortem examination data
		1985-2008	<i>Focus on homicide-suicide:</i> - Drug or alcohol problems in 10% of offenders. - Drug or alcohol problems in less than 1% of victims.	Roma et al. (2012)	Study
		2007-2008	3% of the homicide offenders suffers from active substance abuse (alcohol or otherwise).	Preti & Macciò (2012)	Study
Netherlands	Psychopharmacological	1998, 2002-2004	- Average of 5% of offenders under influence of drugs during crime. - Average of 15% of offenders addicted to drugs.	DHM. See e.g. Smit & Nieuwebeerta, (2007); Leistra & Nieuwebeerta, (2003)	Homicide monitor
	Systemic	1992-2001	Average of one third of homicides within criminal circuit are related to the drug market.		
		1998, 2002-2004	Average of 11% of homicides related to drug deal.		
		2003	- 6% of homicide cases in which a customer killed his dealer. - 2% of homicide cases in which a dealer killed his customer. - 2% of homicide cases in which offender and victim were both users.		
Norway	Psychopharmacological,	1895-2009	In 23% of homicide victims drug were detected in the blood.	Kristoffersen et al. (2014)	Study
		2000-2004	If offender under the influence of drugs during the crime, most often the perpetrator used more than one type of drug.	Lunde (2006)	Study
		2000-2015	Average of 27% of offenders and 17% of victims under influence of drugs/med/multiple substances.	Kripos (2004; 2010; 2015)	Police statistics
	Systemic	2000-2004	Homicides resulting from drug-fights and gang-fights showed an increased tendency for the period 2000-2004 as compared to before.	Lunde (2006)	Study
Portugal	Psychopharmacological	2005-2007	<i>Focus on intimate partner violence against women:</i> - 7% of victims under influence of drugs during crime. - 31% of victims used medication before the crime.	Pereira et al. (2013)	Study
Slovakia	Psychopharmacological	2000-2015	Average of 1% of homicides committed under influence of drugs.	Ministerstvo vnútra SR (2001-2016)	Police statistics
Spain	Psychopharmacological	2004-2007	<i>Focus on Sevilla:</i> Victims tested positive for benzodiazepines (14%), cocaine (12%), opiates (11%), and tetrahydrocannabinol (9%).	Lucena et al. (2008)	Study, using autopsy reports
Sweden	Psychopharmacological	2003-2006	- Average of 21% (male) and 13% (female) of offenders under influence of drugs during crime. - Average of 14% (male) and 4% (female) of victims under influence of drugs during crime. - Average of 37% (male) and 20% (female) of offenders were drug abusers during crime. - Average of 18% (male) and 7% (female) of victims were drug abusers during crime.	Brå, EHM. See: Granath et al. (2011)	Homicide monitor

Table 10: Data sources and research literature (continuation)

Country	DRH data availability	Years	Data	Source(s)	Type of source
Turkey	Psychopharmacological	Not specified	- 9% of offenders diagnosed as cannabis abuser. - 6% diagnosed as multi-substance abuser.	Kugu et al. (2008)	Study
		1994-2005	<i>Focus on parricide offenders:</i> No cases with a history of substance abuse or use of any substance at the time of homicide.	Buyuk et al. (2010)	Study
		2000-2010	<i>Focus on honor killings:</i> No signs of toxic substances.	Ozdemir et al. (2013)	Study
UK: Eng, Wales, Scot	Psychopharmacological	Not specified	<i>Focus on murder cases (no manslaughter):</i> 19% of offenders under influence of drugs during the crime.	Dobash & Dobash (2015)	Study
UK: Eng & Wales	Psychopharmacological	2013-2015	- Average of 14% of homicide offenders intoxicated (10% drugs and alcohol, 4% only drugs). - Average of 10% of homicide victims intoxicated (7% drugs and alcohol, 3% only drugs).	ONS (2016), Homicide Index	DRH statistics drawn from Home Office Homicide Index (homicide monitor)
	Economic-compulsive	2013-2015	- Average of 3% of homicides to obtain drugs. - Average of 3% of homicides to obtain drug proceeds.		
	Systemic	2013-2015	- Average of 13% of homicide cases in which offender and victim were both dealers - Average of 4% of homicide cases in which offender and victim were both users.		
UK: Scotland	Psychopharmacological	2000-2015	Average of 19% of offenders under influence of drugs during crime (11% drugs and alcohol, 8% only drugs).	Scottish Government (2001-2016)	Police statistics
	Economic-compulsive	2000-2015	Average of 12% of victims caused by economic-compulsive and systemic homicide.		
	Systemic	2000-2015			



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