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Homicide Trends in Turkey: A Review of Publicly Available Data

Türkiye'de Öldürme Eğilimleri: Kamuya Açık Verilerin bir Değerlendirmesi

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ABSTRACT

In this paper, homicide related statistics from official sources in Turkey have been compared, in an attempt to identify trends in homicides. Up until now no study has looked at national homicide trends by triangulating different data sources. Data has been extracted from a variety of sources, covering data from agencies from every step of the criminal justice process: Cause of death data, police, prosecution and adjudication data, and prison data. Time period covered included the last 20 years, however due to the lack of availability the time range was different for different types of data. It was found that all those types of data suffer from some limitations, and that it is very difficult to compare data from different sources. In particular, it was found that changes in what is counted and how, made it hard to identify trends over longer periods of time. Further, it was found that administrative decisions that determine how data are collected complicate interpretation and reduce the validity of data. Counting units are inconsistent across different sources making cross-checking problematic. Finally human error in data entry was found to reduce data reliability. Despite these drawbacks, an attempt is made to identify potential trends.

Keywords: Homicide, crime data, murder

ÖZ

Bu makalede Türkiye'de öldürme suçu konusunda eğilimleri tespit etmek amacıyla, çeşitli resmi kaynaklardan erişilebilen istatistikler karşılaştırılmıştır. Şimdiye dek öldürme suçu konusunda ulusal seviyede istatistikleri bu şekilde karşılaştıran bir çalışma yapılmamıştır. Veritabanı oluşturmak için, ceza adaleti sürecinin tüm adımlarını temsil eden kurumların verileri derlenmiştir: Ölüm nedeni istatistikleri, polis istatistikleri, savcılık ve yargılama istatistikleri, ve cezaevi istatistikleri. Veritabanına dahil edilen veriler son 20 seneyi kapsamaktadır. Fakat veri erişilebilirliği kurumdan kuruma değişkenlik gösterdiğinden dolayı, verilerin kapsadığı dönem tüm veriler için aynı değildir. Değerlendirmede tüm bu farklı veri çeşitlerinin bir takım eksiklikleri olduğu ve farklı kaynaktan elde edilen verilerin karşılaştırılmasının çok zor olduğu tespit edilmiştir. Özellikle, sayılan ünitelerdeki ve sayma yönetmelerindeki değişiklikler ortaya çıkan zaman serilerinin anlaşılmasını zorlaştırmaktadır. Verilerin nasıl toplanacağını belirleyen idari kararlar verilerin geçerliliğini düşürmektedir. Kurumdan kuruma sayılma ünitelerinin farklılık göstermesi karşılıklı veri kontrolünü zorlaştırmaktadır. Son olarak da insan hataları verilerin geçerliliğini düşürmektedir. Tüm bu dezavantajlara rağmen, veriler karşılaştırılarak öldürme konusunda ortak eğilimler tespit edilmiştir.

Anahtar Kelimeler: Öldürme, suç verileri, cinayet

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1. Introduction

Killing another person is considered to be one of the most serious crimes, drawing interest from both the public and researchers. The fact that data on homicide are usually more available, and of better quality than data for other types of offences[1] allows it to be studied with more confidence than other types of crime. Furthermore, homicide rates have been called by the UN Economic and Social Council "…the single most reliable crime indicator" (2017: 4), meaning that interest in homicide goes beyond interest in a single type of crime – it can be taken as a general indicator of levels of violence.

In this study the aim is twofold. On the one hand it is to explore different types of homicide data that are available for Turkey, and provide an overview of their scopes, and relative advantages and disadvantages. On the other hand, it is to identify homicide trends in Turkey, as no such overview has been published yet, leaving a major gap in our understanding of crime in the third most populous country in Europe.

Empirical research on homicide in Turkey consists mostly of studies with forensic focus. These are mostly studies with a relatively narrow scope, and there are no comprehensive studies exploring trends on a national level. Most focus on only a particular subtype of homicide, such as filicide,[2] parricide,[3] homicide-suicide,[4] robbery-related homicide,[5] elderly homicide,[6] blood feuds[7], or honour killings.[8] The

1 Gary LaFree and Kriss A Drass, 'Counting Crime Booms Among Nations: Evidence for Homicide Victimization Rates, 1956 to 1998' (2002) 40(4) Criminology 769; Paul Smit and Rinke R de Jong and Catrien CJH Bijleveld, 'Homicide Data in Europe: Definitions, Sources, and Statistics' in Marieke CA Liem and William Alex Pridemore (eds) *Handbook of European Homicide Research* (Springer 2012).

2 Mustafa Karakuş and others, 'Filicide Cases in Turkey, 1995-2000' (2003) 44(5) Croatian Medical Journal 592.

3 Ümit Naci Gündoğmuş and Ümit Biçer and Başar Çolak, 'Kocaeli'nde Ebeveyn Öldürmeler' (2000) 5(3) Adli Tıp Bülteni 236.

4 Ramazan Akçan and others, 'Cinayet-kompleks İntihar: İkili Ölümün Nadir Bir Alt Tipi' (2016) 43(2) Dicle Tıp Dergisi 367; Kamil Hakan Doğan and others, 'Homicide-Suicide in Konya, Turkey Between 2000 and 2007' (2010) 55(1) Journal of Forensic Sciences 110; Mustafa Burak Sayhan and others, 'Öldürme Ardından Özkıyım: Olgu Sunumu ve Literatürün Gözden Geçirilmesi' (2011) 12 Anatolian Journal of Psychiatry/Anadolu Psikiyatri Dergisi 312.

5 Mehmet Sunay Yavuz and others, 'Robbery-Related Homicides of Taxi Drivers in Three Big Cities of Turkey Between 1996 and 2006' (2010) 27(1) Trakya Üniversitesi Tıp Fakültesi Dergisi 59.

6 Özlem Erel and Serpil Aydin-Demirağ and Ufuk Katkıcı, 'Homicide and Suicide in the Elderly: Data From Aydın' (2011) 14(4) Turkish Journal of Geriatrics 306.

7 Tülin Gülşen İçli, 'Blood Feud in Turkey: A Sociological Analysis' (1994) 34(1) The British Journal of Criminology 69.

8 Recep Doğan, 'The Profiles of Victims, Perpetrators, and Unfounded Beliefs in Honor Killings in Turkey' (2014) Homicide Studies 18(4) 389; Cem Zeren and Esra Kiriktir and Muhammet Mustafa Arslan, 'Evlilikte Töre Etkisi Sonucu İkili Ölüm' (2012) 39(2) Dicle Tıp Dergisi 306.

majority also further limit the cases included into the study to just one city, such as Istanbul,[9] Kocaeli,[10] Kahramanmaraş,[11] Aydın,[12] Konya,[13] or Adana.[14]

One of the difficulties associated with studying homicide, as is with studying any other type of crime, is that one must settle on a particular definition, and then be able to access data that satisfies it. Legal definitions of homicide vary from country to country,[15] depending on their laws and legal traditions, but the common requirement is that a person is killed, there has been at least some presence of intention, that the offender was a human, and the killing was unlawful.[16] Non-intentional killing, resulting in death, may be similar to a homicide in terms of its consequence for the victim, but it is dissimilar in the terms of the intent, which is commonly a crucial part of the homicide definition.[17] Each country uses its own definition in the collection of the data, but even within a country, different agencies that collect data may be using different definitions. In Turkey homicide is defined by articles 81, 82 and 83 of Turkish Criminal Code (2004): Article 81 defines intentional killing as an offence, Article 82 defines aggravating circumstances, and Article 83 defines killing by omission.

Commonly, homicide is studied using medical and criminal justice system data.[18] Medical data (also called "cause of death" data) are usually aggregated into vital statistics that are commonly publicly available both nationally, as well as internationally through the World Health Organisation's (WHO) database. Criminal justice system data are much more varied, and include data collected by the law enforcement, judicial, and correctional agencies. There is great variability in collection and publication of such data across different counties.[19]

9 Aytekin Geleri and Mesut Demirbilek, 'Crime Victimisation: A Study Into the Profile of Homicide Victims in Istanbul' (2006) 8(1) International Journal of Police Science and Management 33.

10 Gündoğmuş and Biçer and Çolak (n 3).

11 Zerrin Erkol and others, 'Kahramanmaraş'ta Meydana Gelen Ateşli Silah Yaralanmasına Bağlı Ölümler' (2011) 25(1) Adli Tıp Dergisi 1.

12 Erel and Aydin-Demirağ and Katkıcı (n 6).

13 Doğan and others (n 4).

14 Ahmet Hilal and others, 'Homicide in Adana, Turkey: A 5-year review' (2005) 26(2) The American Journal of Forensic Medicine and Pathology 141.

15 Enrico Bisogno and Jenna Dawson-Faber and Michael Jandl, 'The International Classification of Crime for Statistical Purposes: A New Instrument to Improve Comparative Criminological Perspective' (2015) 12(5) European Journal of Criminology 535.

16 Smit and de Jong and Bijleveld (n 1).

17 Ibid.

18 Ibid.

19 Marcello F. Aebi and others, *European Sourcebook of Crime and Criminal Justice Statistics 2014* (5th edition European Institute for Crime Prevention and Control 2014).

This study will provide a review of all publicly available data related to homicide for Turkey. This will include cause of death data, police data, judicial data (prosecution, conviction, and sentencing data), and prison data. Each source will be described in detail, along with coverage and meta-data information. Problems with each type of data will be discussed, and finally observable trends will be discussed.

2. Data and Findings

2.1. Cause of Death Data

Türkiye İstatistik Kurumu (Turkish Statistical Institute, TÜİK) collects cause of death data, and shares it with Eurostat and WHO. Those statistics are accessible through TÜİK,[20] Eurostat[21], and WHO[22] databases, for years 1999-2016, 2011-2015 and 1983-(1984-1986)-2013, respectively. Statistics obtained from the three databases are identical for years available. Figure 1 shows WHO data for 1983-2008 (ICD 8), and TÜİK data for 2009-2016 (ICD 10).

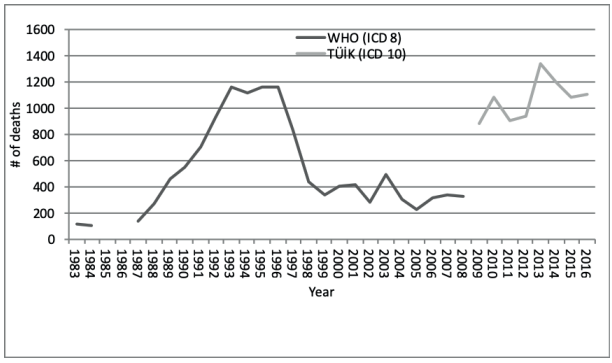

Figure 1. Number of deaths classified as homicide - WHO and TÜİK data (1983-2016).

A steep increase in the number of deaths classified as homicides is observable until mid-1990s, followed by a sharp drop during 1998. Numbers remained relatively stable until the increase again in 2009, peaking in 2013. The 2009 and 2013 increases are likely caused by changes in the data collection methodology.

Prior to 2009, the collection of cause of death statistics was not standardized in

20 TÜİK, 'Ölüm Nedeni İstatistikleri' <www.tuik.gov.tr/PreTablo.do?alt_id=1083> accessed 4 December 2018.

21 Eurostat, 'Database: Cause of Death' <http://ec.europa.eu/eurostat/web/health/causes-death/data/database> accessed 4 December 2018; Annual causes of death statistics are available from Causes of death - deaths by country of residence and occurrence[hlth_cd_aro] table, (ICD 10 X85-Y09_Y871 code)

22 World Health Organisation, 'WHO CoDQLCause of Death Query Online' <http://apps.who.int/healthinfo/statistics/mortality/causeofdeath_query/start.php> accessed 4 December 2018.

Turkey. Rural areas were not consistently included, the extent of the coverage is unclear, and data were collected and aggregated manually.[23] For these reasons pre 2009 statistics should be treated as incomplete and unreliable, and observable fluctuations in the data likely have little to do with any actual trends in homicide.

Furthermore, up until 2008, ICD 8 was used in Turkey for cause of death classification. In annual statistics (as well as those submitted to WHO) this translated into aggregated statistics for 150 categories of causes of death. Cause category A148, which was used for reporting homicide until 2008, aggregates data for Homicide ("Homicide and injury purposefully inflicted by other persons", causes E960-E969) and Legal Intervention (causes E970-E978) categories into a single statistic.[24]

In 2009 International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD 10) became the standard in Turkey.[25] With the introduction of the new classification, trainings for physicians were organised as well, aiming to improve data collection, which likely had a positive effect on the quality of data.[26]

ICD 10 defines homicide as "[death due to] injuries inflicted by another person with intent to injure or kill, by any means".[27] ICD 10 specifically excludes legal intervention from homicide category. TÜİK provides aggregated statistics for deaths caused by homicide and assault, including ICD 10 codes X85 through to Y09.[28] Homicide definition in ICD 10 is more exclusive than that in ICD 8 (due to exclusion of "Legal intervention" cases), and thus one should expect to see a drop in the number of homicides in 2009, rather than the observable increase. Research indicates that the introduction of ICD 10 nomenclature in Turkey, which was followed by extensive training for doctors, improved the quality of data collection. For example it was found that the variety of causes of death identified in death certificates increased by 60%[29] following the adoption of ICD 10 and relevant trainings, indicating that "catch

23 TÜİK, *Resmi İstatististik Programı 2017-2021* (Türkiye İstatistik Kurumu Matbaası 2017) 50.

24 World Health Organisation, 'WHO Mortality Data Base Documentation' (1 October 2017 update, World Health Organization: Department of Information, Evidence and Research 2017) <www.who.int/healthinfo/statistics/documentation.zip?ua=1> accessed 4 December 2018.

25 Tanzer Korkmaz and Burçin Balaban, 'Ölüm Raporlarında Belirtilen Ölüm Nedenlerinin Kendi Aralarında ve ICD Kodlarıyla Uyumunun Değerlendirilmesi' (2014) 52(2) Medical Bulletin of Haseki/Haseki Tip Bülteni 103.

26 Pınar Okyay and others, 'Adnan Menderes Üniversitesi Uygulama ve Araştırma Hastanesi 2008-2009 yılı Ölüm Nedenleri İstatistiklerinde Değişim: Bir Müdahale çalışması' (2011) 12(1) ADÜ Tıp Fakültesi Dergisi 1.

27 World Health Organisation, 'International Statistical Classification of Diseases and Related Health Problems 10th Revision 8' (2010) <http://apps.who.int/classifications/icd10/browse/2010/en> accessed 4 December 2018.

28 Separate statistics for all subcodes are available from WHO website, and using its on-line database query, statistics for codes identical to those used by TÜİK can be generated. World Health Organisation (n 22).

29 Okyay and others (n 26).

all" categories were used less and cause of death was entered with more specificity. With this, it is possible that identification of homicide as the cause of death increased as well, which would explain the observable increase in homicides.

Increase in 2013 is likely related to the change in how death certificates are generated, which was introduced that year. In 2013, on-line browser based Electronic Death Notification System (EDNS), managed by *Sağlık Bakanlığı* (Ministry of Health - MOH), was introduced, and it has since been used to generate and submit death certificates for all deaths regardless of the setting.[30] Data are then passed on to TÜİK for analysis. Cause of death is determined and entered into the EDNS using a standardised procedure. If non-natural cause of death becomes evident during the post mortem examination, doctor conducting the examination is obliged to report this to the legal authorities for medical-legal postmortem. In cases of suspected homicide, autopsy is mandatory,[31] and the cause of death is determined only after the autopsy is completed. In the meantime "under investigation" is entered into death certificate, which should be updated once the cause of death is determined. Section H of the on-line system is equivalent to the International Form of Medical Certificate of Cause of Death, and doctors can complete it in free hand, or by using a drop down menu with ICD 10 categories,[32] making it easier for doctors to enter different cause of death categories. Introduction of this new methodology for issuing death certificates, which simultaneously has become a new data collection method, must have had an effect on data reliability, scope, and quality.

When it comes to death related statistics, it is evident that it is hard to evaluate the reliability of statistics generated. While cause of death data have been used extensively in homicide research, especially for cross-national comparisons,[33] problems with using this type of data as indicator of homicide rates has also been discussed.[34] In

30 Mustafa Talip Şener and Çağrı Kara, 'Adli Nitelikli Ölümlerin Belirlenmesi ve İzlenecek Yol' (2014) 24(ek 2) Genel Tıp Dergisi 58; TÜİK (n 23) 60.

31 Sermet Koç and Muhammet Can, 'Ölüm Kavramı ve Ölü Muayenesi' (2009) 22 Klinik Gelişim Dergisi 11.

32 Sağlık Bakanlığı, 'Ölüm Kaydı Bildirim Sistemi: Kullanım Kılavuzu' <obs.gov.tr/yardim/OBS_KILAVUZ/OBS_GİRİŞ.htm> accessed 4 December 2018).

33 Don Soo Chon, 'Medical Resources and National Homicide Rates: A Cross-National Assessment' (2010) 34(1) International Journal of Comparative and Applied Criminal Justice 97; Julio H Cole and Andres Marroquin Gramajo, 'Homicide Rates in a Cross-Section of Countries: Evidence and Interpretations' (2009) 35(4) Population and Development Review 749; Marieke CA Liem and William Alex Pridemore (eds), *Handbook of European Homicide Research: Patterns, Explanations, and Country Studies* (Springer Science and Business Media 2011)

34 Meghan L Rogers and William Alex Pridemore, 'Geographic and Temporal Variation in Cross-National Homicide Victimization Rates' in Fiona Brookman and Edward R Maguire and Mike Maguire (eds), *The Handbook of Homicide* (John Wiley and Sons 2017); Smit and de Jong and Bijleveld (n 1).

Turkey, research indicates that non-natural deaths sometimes do not get reported to authorities for medical-legal postmortem, and other causes of death end up entered into the death certificate instead,[35] and in rural areas there are frequent instances of deaths altogether not getting reported.[36] Cause of death in cases of non-natural deaths of possibly criminal nature, when medical-legal postmortem is legally required, often remains unspecified in the death certificate, even after the autopsy has been completed and cause of death clarified.[37] Further, incorrect use of the system due to inexperience of medical examiners and their lack of knowledge has been reported as one of the reasons behind low quality of data both in Turkey as well as internationally.[38] Studies further indicate that the case of death is often misidentified.[39] For example in Turkey "cardiac arrest" is so often entered into form as a cause of death, including deaths due to completely different causes, that it has come to be known as "garbage code".[40] Deaths due to homicide can also end up classified as "event of undetermined intent"[41], further reducing the number of identified homicides.

All this indicates that homicides are likely to be underreported as a cause of death. Further, procedural changes (such as switches from one collection method to another, or a change in the classification system used) can result is large changes in the number of reported cases, as has likely happened in years 2009 and 2013. This makes it difficult to discern the actual trends from these data.

2.2. Law Enforcement Data

In Turkey, law enforcement encompasses *Emniyet Genel Müdürlüğü* (EGM) (Turkish National Police, officially called General Security Directorate - law

35 Şerafettin Demirci and others, 'An Evaluation of the Exhumation Cases Performed in Konya Between 2001 and 2007' (2008) 13(2) The Bulletin of Legal Medicine 63; Şener and Kara (n 30).

36 Resmi İstatistik Programı, 'Ölüm Nedeni İstatistiklerinin Kapsam ve Kalitesinin Artırılması' (Official Statistics Program - Minutes of meeting held on May 12, 2017) <www.resmiistatistik.gov.tr/sites/default/files/olum_nedeni_istatistikleri_05122017_0.pdf > accessed 4 December 2018.

37 Resmi İstatistik Programı, 'Ölüm Nedeni İstatistikleri' (Official Statistics Program Minutes of meeting held on July 9, 2014) <www.resmiistatistik.gov.tr/sites/default/files/olum_nedeni_istatistikleri_09072014.pdf> accessed 4 December 2018; Resmi İstatistik Programı (n 36); Şener and Kara (n 30).

38 Erin G Brooks and Kurt D Reed, 'Principles and Pitfalls: A Guide to Death Certification' (2015) 13(2) Clinical Medicine and Research 74; Okyay and others (n 26); Rogers and Pridemore (n 34).

39 Celal Bütün and others, 'Defin Ruhsatlarında Belirtilen Ölüm Nedenlerinin İncelenmesi' (2006) 28(3) CÜ Tıp Fakültesi Dergisi 79; Kathryn A Myers and Donald R Farquhar, 'Improving the Accuracy of Death Certification' (1998) 158(10) Canadian Medical Association Journal 1317.

40 Okyay and others (n 26) 9.

41 Evgeny Andreev and others, 'A Method for Reclassifying Cause of Death in Cases Categorized as "Event of Undetermined Intent"' (2015) 13(1) Population Health Metrics 23.

enforcement jurisdiction for urban areas), *Jandarma Genel Komutanlığı* (General Command of Gendarmerie - law enforcement jurisdiction for rural areas), and *Sahil Güvenlik* (Coast Guard - maritime jurisdiction). Turkish National Police and Gendarmerie have jurisdiction over almost all homicides, and thus should be a potential source of data. Neither, however, publishes or publicly shares data or statistics regarding crime. In fact, the website of the Turkish National Police used to include some crime related statistics up until 2003.[42] Since, it includes no crime related statistics what so ever, and annually published Activity Report includes only very perfunctory crime statistics. For example, "2017 Activity Report" includes only the total number of "security events",[43] and the total number of persons detained for drug related crimes for the year in question.[44] It includes no breakdowns by type of crime, characteristics of victim, or offender, or any other descriptive or analytical review of crime data. In fact, according to 2017-2021 Official Statistics Program, General Security Directorate has not been generating any crime statistics since 2009,[45] even though incidence data are being collected by the Ministry of Interior.[46] In short, even though law enforcement agencies in Turkey do collect crime related data, none of it is made public, in raw or aggregated form (as statistics or reports).

Data collected by the Turkish law enforcement agencies are, however, shared (in a rather limited form) with Eurostat and the UNODC (through its United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems - UN-CTS). Eurostat databases include data on intentional homicide for 1998-(2008)-2012.[47] Those are shown in Figure 2.[48]

42 Tuba Topçuoğlu, 'Türkiye'de Suçluluğa ve İnfaz Politikalarına İlişkin Veri İhtiyacı' (2015) 3(1) Ceza Hukuku ve Kriminoloji Dergisi 167.

43 Emniyet Genel Müdürlüğü, *2017 Faaliyet Raporu* (T.C. İçişleri Bakanlığı Emniyet Genel Müdürlüğü 2018) 16, <www.egm.gov.tr/Documents/EGM2017FaaliyetRaporu.pdf > accessed 4 December 2018.

44 Emniyet Genel Müdürlüğü (n 43) 17.

45 TÜİK (n 23) 68.

46 TÜİK (n 23) 86.

47 Statistics for years 1998-2007 are available from "Crime-Historical data – Crime recorded by the police by offence category" table (*crim_gen* table). Data for years 2009-2012 are available from "Recorded offences by offence category – police data" table (*crim_off_cat* table). Finally, homicide victim data for year 2009-2012 are available from "Intentional homicide victims by age and sex - number and rate for the relevant sex and age groups" table (*crim_hom_vage* table). All available from Eurostat, 'Database: Crime and Criminal Justice' <http://ec.europa.eu/eurostat/web/crime/database> accessed 4 December 2018.

48 Rates were calculated using population data obtained from TÜİK's public databases. For years 2007 and later data from "Yıllara, yaş grubu ve cinsiyete gore nüfüs, Genel nüfus sayımlarım – ADNKS" [Population by years, age group and sex, 1935-2017] table were used (TÜİK, 'Temel İstatistikler: Nüfus ve Demografi – Nüfus İstatistikleri' <www.tuik.gov.tr/UstMenu.do?metod=temelist> accessed 4 December 2018). For years prior to 2007, estimations from "Yıl ortası nüfus" [Mid-year population] table were used. (TÜİK, 'Nüfus Projeksiyonları: Yıl Ortası Nüfus' <www.tuik.gov.tr/PreTablo.do?alt_id=1027> accessed 4 December 2018).

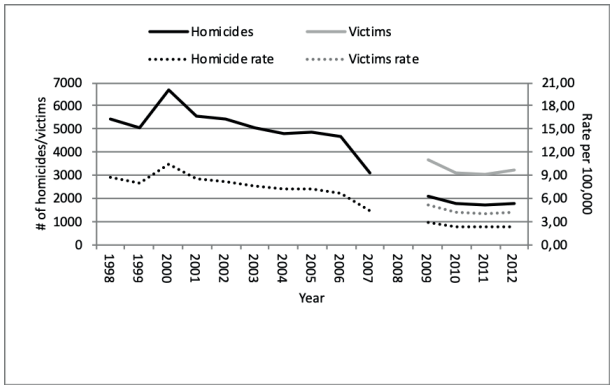

Figure 2. Number and rate (per 100,000) of homicides and homicide victims – Eurostat data (1998-2012).

Without knowing much about how law enforcement agencies in Turkey collect and aggregate data, it is hard to evaluate the reliability of the data submitted to Eurostat. Therefore trends in homicide rates that appear to exist should be carefully considered.

On another note, as Eurostat has changed the definition used for homicide in 2008, data collected before and after this year may not be fully comparable.[49] There are two main differences between the two definitions: First, the inclusion of manslaughter prior to 2008, and second, the use of the number of victims prior to 2008 (rather than the offences). Eurostat warns that data prior to and after 2008 are not comparable,[50] and therefore apparent changes in crime around those years should not be seen to constitute a trend in actual crime rates.

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49 Prior to 2008 (with 2007 being the last year to use that definition), the definition for homicide used was as follows:
"… intentional killing of a person, including murder, manslaughter, euthanasia and infanticide. Causing death by dangerous driving is excluded, as are abortion and help with suicide. Attempted (uncompleted) homicide is also excluded. The counting unit for homicide is normally the victim (rather than the case)." (Eurostat, 'Crime – Historical Data (until 2007) (crim_h). Reference Metadata in Euro SDMX Metadata Structure (ESMS)' (2014) section 3.4 <http://ec.europa.eu/eurostat/cache/metadata/en/crim_h_esms.htm> accessed 4 December 2018.
Since 2008, however, Eurostat collects data in cooperation of UN-CTS, and the definition it uses is in line with the International Classification of Crime for Statistical purposes (ICCS) definition:
"…unlawful death purposefully inflicted on a person by another person. Data on intentional homicide should also include serious assault leading to death and death as a result of a terrorist attack. It should exclude attempted homicide, manslaughter, death due to legal intervention, justifiable homicide in self-defence and death due to armed conflict." (Eurostat, 'Crime and Criminal Justice (crim). Reference Metadata in Euro SDMX Metadata Structure (ESMS)' (2016) section 3.4 <http://ec.europa.eu/eurostat/cache/metadata/en/crim_esms.htm> accessed 4 December 2018.

50 Eurostat, 'Crime and Criminal Justice (crim). Reference Metadata in Euro SDMX Metadata Structure (ESMS)' (2016) section 15.1 <http://ec.europa.eu/eurostat/cache/metadata/en/crim_esms.htm> accessed 4 December 2018.

Further, the difference between the number of victims and the number of offences in Turkish data is notable, with the number of victims close to the double of the number of offences. For most other countries the difference is either much smaller, or the numbers are in fact identical. Without better insight into how Turkish police collects, keeps and aggregates its data, it is difficult to evaluate Eurostat data.

UNODC database include intentional homicide victim data for years 2003-2012,[51] and those are shown in Figure 3.[52] Eurostat and UNODC victim data are identical, however UNODC data goes further back in time.

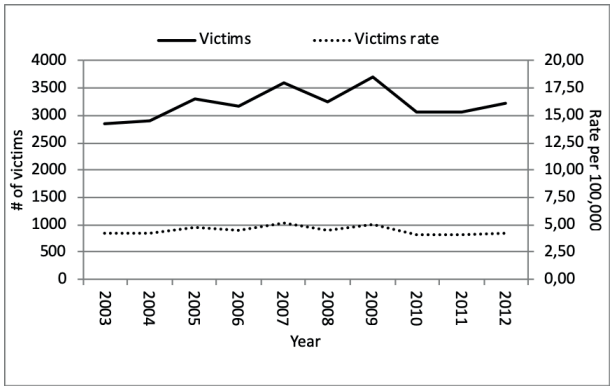

Figure 3. Number and rate (per 100,000) of homicide victims - UNODC data (2003-2012).

To summarize, homicide data collected by law enforcement agencies in Turkey are only available through Eurostat and UNODC databases. Lack of clarity as to how homicide offence data was collected and aggregated by Turkish agencies before sharing it with Eurostat makes it difficult to evaluate observable trends in the data. UNODC victim data are similarly opaque, however if taken at face value it could be concluded that the homicide victimization rates have been relatively stable over the decade spanning 2003-2012 (the trend line is practically flat), ranging between 4.10

51 UNODC indicates that it defines homicide as:
"… unlawful death purposefully inflicted on a person by another person. Data on intentional homicide should also include serious assault leading to death and death as a result of a terrorist attack. It should exclude attempted homicide, manslaughter, death due to legal intervention, justifiable homicide in self-defence and death due to armed conflict",
but it also notes that data supplied by countries may not exactly reflect this definition. This definition and warring are provided when "Homicide Court and Rates 2000-2015" table is generated at UNODC Statistics (UNODC, 'UNODC Statistics (database)' <http://data.unodc.org> accessed 4 December 2018)

52 Data for "Rate per 100,000" was available from UNODC database. However, for the sake of consistency, rates were calculated using homicide data from UNODC database, and TÜİK population data (same data that was used for Eurostat calculations, see Footnote n 48).

and 5.10, with the mean of 4.51 and SD of 0.37. Due to lack of availability of data since 2012, it is impossible to conclude whether there have been any changes in this trend more recently.

2.3. Prosecution and Adjudication Data

Prosecution and adjudication statistics are collected and published by *Adalet Bakanlığı* (Ministry of Justice - MOJ) annually. While raw data are not publicly accessible, MOJ publishes relatively detailed statistics, broken down by region, gender, or by relevant article from the Turkish Criminal Code. Statistics are available via publications from the Directorate General for Criminal Records and Statistics. Older publications of justice statistics, going back to 1940s, are available from the TÜİK's electronic archive, but those are less detailed and do not include breakdown by the type of offence.

Prosecution and adjudication related statistics are broken down by articles of the Turkish Criminal Code (2004). As already mentioned, articles relevant to intentional homicide are 81, 82 and 83. Attempted homicide, however, is not defined as a separate offence. Rather, when person is prosecuted for and convicted of attempted homicide, they are still prosecuted and convicted under Art. 81, 82 and/or 83, but the sentence is reduced in accordance with Art. 35 of the Turkish Criminal Code, which defines criminal attempt. Consequently, prosecution, trial and sentencing statistics for intentional homicide do not distinguish between attempted and completed homicides. It is impossible to extract statistics for completed homicide alone.

Prior to 2009 published statistics were not broken down by offence at all. Published prosecution stage data for homicide include numbers of cases disposed in a given year, broken down the by the type of disposition. "Prosecutorial decision" is used as the counting unit, but it is not quite clear what the counting rules are. Since there could be more than one offender per offence, more than one suspect could be investigated, and therefore there could be more than one "decision" per offence. However, when comparing different tables published in MOJ statistics publications, it becomes apparent that statistics do not refer to number of suspects. For example, Table 2.2 in "Judicial statistics 2016"[53] shows that in 2016 prosecutorial decisions were made

53 Adalet Bakanlığı, *Judical Statistics 2016* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2017) 52.

regarding 3,971,757 suspects (total for all offences). Table 2.4[54] however indicated that a total of 6,337,622 prosecutorial decisions were rendered in 2016 (total for all offences). Unfortunately, breakdown by offence is available only for "decisions rendered", rather than for suspects. Therefore, no data regarding the number of homicide suspects, victims, or cases at the prosecution stage are publicly available.

Figure 4 shows prosecution stage data for years 2009-2017 obtained from Judicial Statistics publications.[55] An upward trend (up until 2015) in the total number of decisions related to homicide can be observed, with a drop in 2016, and then again slight increase in 2017. There was a close to 50% increase in homicide related prosecutorial decisions between 2009 and 2017. The number of decisions to indict slowly increased between 2009 and 2016, with a larger increase in 2017, again resulting in close to 50% increase in the number of decision to indict between 2009 and 2017. This translated to an approximate 30% increase in rates.

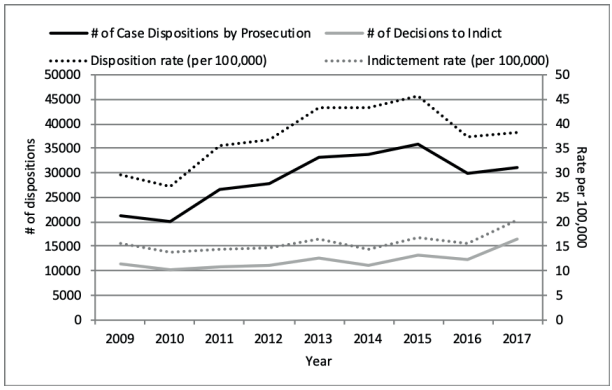

Figure 4. Number and rates (per 100,000) of homicide related prosecutorial dispositions (2009-2017).

Prosecution data for Turkey for intentional homicide are not available from UNODC or Eurostat, meaning that no other public sources that can be used to gain better insight into the prosecution of the homicide cases are accessible.

54 İbid, 53.

55 Adalet Bakanlığı, *Judical Statistics 2009* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2010); Adalet Bakanlığı, *Judical Statistics 2010* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2011); Adalet Bakanlığı, *Judical Statistics 2011* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2012); Adalet Bakanlığı, *Judical Statistics 2012* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2013); Adalet Bakanlığı, *Judical Statistics 2013* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2014); Adalet Bakanlığı, *Judical Statistics 2014* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2015); Adalet Bakanlığı, *Judical Statistics 2015* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2016); Adalet Bakanlığı (n 53); Adalet Bakanlığı, *Adli İstatistikler 2017 (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2018)*.

Adjudication and conviction data for homicide (attempted and completed), taken from Judicial Statistics publications,[56] include the number of offenders who were tried, and the number of decisions reached. These are shown in Figure 5, which also includes homicide convictions data that were obtained from UNODC database for years 2003-(2008)-2014.[57] Those, for the most part, are identical to those obtained from MOJ, but go further back.

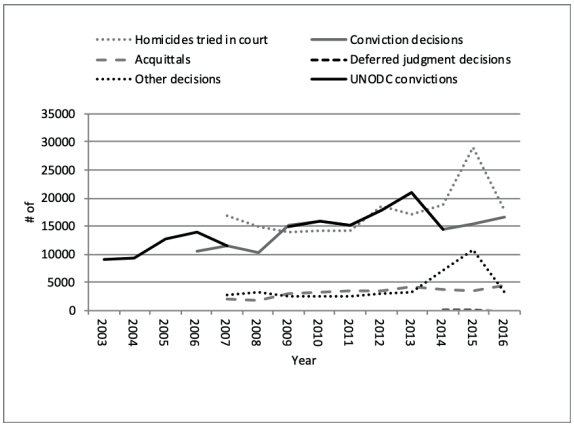

Figure 5. Number of homicides tried in court and number of trial decisions by type (2003-2016).

Examination of the data and the meta-data points out to some issues. First, up until 2009 principal offense rule was used in the collection of adjudication data, and cases were counted, with only the most serious offence being counted. Since 2009, each offence is counted separately for each offender.[58] Thus, for example, if there was one case involving two offenders, both convicted of two offences each, each getting a combination sentence, there could be a total of six or more conviction decisions counted. Secondly, it became clear that "conviction" data are not really conviction data, but data on the number of measures issued: Each type of sentence/measure is counted as a separate "conviction". Therefore if an offender were given a combination sentence (prison and a security measure, for example), each would be counted separately. As a result, the sum of different decisions (including "convictions", acquittals and other) is higher than the number of cases or offenders indicted or tried.[59]

56 Adalet Bakanlığı, *Judical Statistics 2007* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2008); Adalet Bakanlığı, *Judical Statistics 2008* (T.C. Adalet Bakanlığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2009); Adalet Bakanlığı 2010, 2011, 2012, 2013, 2014, 2015, 2016 (n 55); Adalet Bakanlığı (n 53).

57 UNODC, 'UNODC Statistics (database)' <http://data.unodc.org> accessed 4 December 2018.

58 Adalet Bakanlığı (n 53) "Veri derleme tekniği", para. 3.

59 For this reason, rates were not calculated.

Further, it should be kept in mind that in Turkey evidence collection continues throughout the trial process, and trial hearings may be spaced months apart. A trial with three of four hearings can stretch over months, or even a year. In fact, an average length of a trial in criminal courts in Turkey in 2016 was 274 days (almost 9 months)[60] and there have been examples of much longer trials, with outliers lasting years on end.[61] Consequently, total number of court decisions reached can be much higher (if judges are trying to clear backlog) or much lower (if trials are taking place at particularly slow pace) than the number of cases opened in that year.

Finally, there may be more than one "outcome" for the same homicide, and thus the same offence may be counted more than once in a year. For example, "other" decision category includes lack of venue, lack of jurisdiction, joinder, and judgment of no penalty decisions. Hence, for example, if a joinder decision was issued for a homicide case, that would be entered into statistics and counted as "other". However, the case would be joined with another case and adjudicated never the less, and the decision reached would be counted as well. If all this happened in one year, two decisions would be counted for the same homicide offence. If the case went back and forth between courts due to jurisdiction issues, each decision would be counted separately. In theory, and in the light of what was described earlier regarding how "convictions" are counted, one could have a few decisions per year for the very same case. To further complicate, appellate process is mandatory for all homicide cases. A case for which retrial was mandated as a result of the appeal, would show up again in statistics. Therefore, the same case can show up in adjudication statistics over and over again, in same or different years. Unfortunately, data on the number or proportion of cases that are retried is not publicly available.

All this makes it hard to discern any trends in actual completed homicides from prosecution and adjudication statistics, as they reflect administrative operations of the court system, and are rather distant from actual crime event. It does appear that there was an increase in the number of convictions, with the number of convictions more than doubling between 2003 and 2013. But in 2014 there was a close to 25% drop in the number of convictions, which was then again followed by a slow increase over the next two years. It appears that the drop in 2014 was an atypical event. No changes in

60 Adalet Bakanlığı, *Adli İstatistikler 2016 (T.C. Adalet Banalığı, Adli Sicil ve İstatistik Genel Müdürlüğü 2017)* 37 Table 2-10.

61 İdil Elveriş and Galma Jahic and Seda Kalem, *Alone in the Courtroom: Accessibility and Impact of the Criminal Legal Aid Before Istanbul Courts* (2007 İstanbul Bilgi Üniversitesi Yayınları) 209.

legislation, policy, or legal precedent that could explain this rather dramatic drop could be identified. In the absence of police data for those years, it is hard to say whether those trends are related in any way to actual homicide levels, or if they reflect some bureaucratic and administrative changes in the way cases are processed and/or counted.

Given legally prescribed sentences, virtually all intentional homicide convictions should result in a prison sentence, even though judges can also combine them with other measures. While more than one person can receive prison sentence for the same homicide, and one person can get more than one type of sentence for one homicide, the same person cannot get more than one prison sentence for the same homicide. Therefore, data regarding the number of prison sentences rendered for homicide convictions are actually closest to the number of offenders convicted of homicide. These are shown in Figure 6.[62] Overall a downward trend is observable, starting in 2013, with 21% decrease in the total number of those sentenced to prison for homicide since 2013. This amounts to 24% decrease in the rate per 100,000.

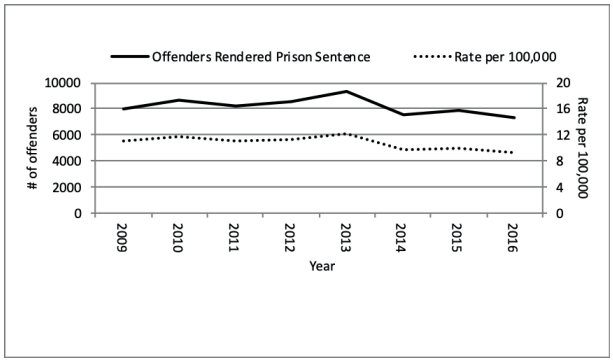

Figure 6. Number and rate (per 100,000) of offenders sentenced to prison for homicide (2009-2016).

To summarise, statistics regarding prosecution and adjudication stage for homicide are annually published and publicly available. Breakdown by offence is structured based on the Turkish Criminal Code, resulting in aggregation of data for attempted and completed homicides, making it impossible to disentangle the two. Perhaps structure of the data collection system would actually allow such disaggregation, however since the database itself is not publicly available it is impossible to make such evaluation.

62 Prior to 2009 breakdown by offence not available.

Examination of the data obtained for prosecution, trial, and sentencing stage indicate to a number of problems with data. Differing and unclear counting units at different stages of the process make it almost impossible to interpret data in any meaningful fashion. Lack of access to the database itself makes it very hard to get a good grip on what is actually counted and why.

As can be seen in Figure 7, one observable trend is that while there has been a notable increase in the number of those indicted since 2009, there has been a decrease in the number of those sentenced to prison, during the same time period. Notable increase in indictments in 2017 may reverse the downward trend in the prison sentences rendered in the coming years, but this effect may not become observable just yet, given the length of trials.

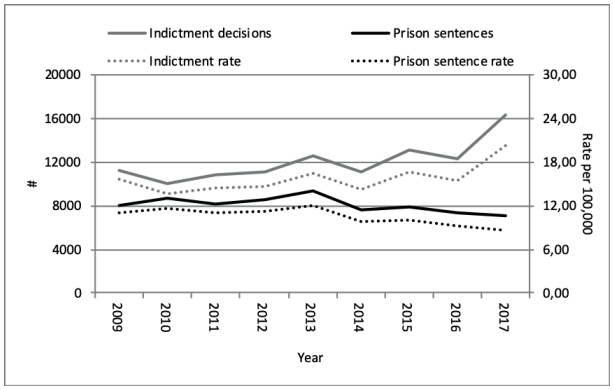

Figure 7. Number and rates (per 100,000) of homicide indictment decisions and prison sentences rendered for homicide (2009-2017).

2.4. Prison System Data

Prisons, a final source of data reviewed here, in Turkey are operated by *Ceza ve Tevkif Evleri Genel Müdürlüğü* (General Directorate for Prisons and Detention Houses - Prisons Directorate), which is a department within the Ministry of Justice. Prisons Directorate collects inmate related data, and shares it with TÜİK. Until 2014, TÜİK annually produced a dedicated "Prisons statistics" publication.[63] Since, data have become available in the form of various aggregated tables (for years 2009 and later), and on-line queries (for years prior to 2009), including meta-data and explanatory notes, all publicly accessible from TÜİK's website.[64] Prison Directorate

63 TÜİK, *Prison Statistics 2013* (Türkiye İstatistik Kurumu Matbaası 2014).

64 TÜİK, 'Adalet İstatistikleri' <www.tuik.gov.tr/VeriBilgi.do?alt_id=1070> accessed 4 December 2018).

also publishes some additional data on its website. Prisoner inflow data for homicide are available from TÜİK, and are shown in Figure 8.[65] Stock data are not broken down by the type of offence.

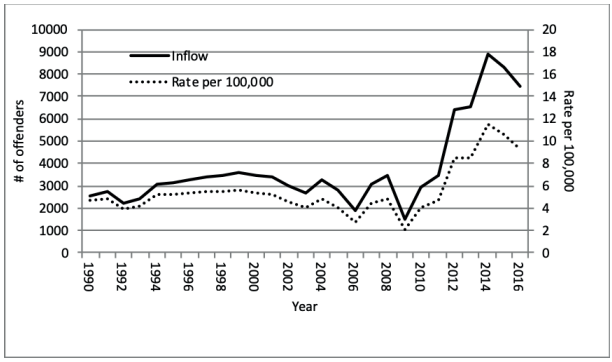

Figure 8. Number and rates (per 100,000) of offenders entering prison to serve homicide related sentence (1990-2016).

These data refer to offenders entering prison to serve their sentence. Those who are detained pending conviction are not included, and neither are those who are convicted and detained pending the appellate process. Prisoners are counted as "incoming" only after the appellate process has been completed and the sentence confirmed,[66] as their status changes from "detained" to "serving". As of 2016, Court of Cassation (which had the jurisdiction over appellate process) had a large backlog of cases. On average the length of the appellate process at the Court of Cassation for criminal cases was over 1000 days.[67] [68] As appeal is automatic for all homicide cases, inflow data does not correspond to those sentenced in a given year, but rather to those sentenced years ago, whose appellate process has just been completed. Rate of the disposition at the appellate level, therefore, greatly influences inflow data.

Another problem with the data shown in the Figure 8 is that it is not completely clear what offences are included, and metadata does not clarify this. In the absence of separate "attempted homicide" statistics, one can assume that those are aggregated with completed homicide statistics, even though this is not clearly stated. It is unclear

65 For years prior to 2007, population estimates were used in calculating rates. See Footnote n 48.

66 TÜİK (n 64).

67 Adalet Bakanlığı (n 60) Tables 6.1 and 6.3, pages 231 and 233, respectively.

68 In 2017 changes were made to the appellate process with introduction of Appellate Courts. This change should reduce the length of the appellate process, as Appellate Courts are much more numerous and should be able to handle much bigger case load than the current Court of Cassation.

whether manslaughter (Art. 85 of the criminal code) is also included, but given the absence of separate data for this offence, one must assume that those are included in "homicide" data as well. Therefore, inflow statistics for homicide likely include offences that were not included in prosecution and adjudication data.

What is apparent is that there has been more irregularity since 2005, with a steep increase in the number of prisoners recorded as entering prison for homicide since 2009. In fact, the rate tripled between 2006 and 2016. Turkish Criminal Code (2004), Criminal Procedure Code (2004), and Law on the Execution of Sentences and Punitive Measures (2004) have all come into force in 2005, creating a significant shift in the criminal justice system and process. Further, since 2005 there has been general increase in the prison capacity (through constructions of new prisons), followed by a steep increase in prison population. To illustrate, in 2005 stock statistics show that there were 55,870 inmates (pre and post-conviction total) in prisons, while in 2017 same total was 228,933, reflecting a staggering four-fold increase in the prison population over a period of 12 years.[69] This increase was driven by the changes in legislation regarding served mandatory minimums, but enabled by the construction of new prisons. As a part of judicial reform measures, a wave of prison construction had started after year 2000, with the goal of modernising prisons and closing down old and small prisons, to be replaced with large prisons campuses with large capacity.[70]

Further, in 2011 number of chambers at Court of Cassation was increased, with the aim of reducing the workload of individual chambers, and therefore shortening the appellate process. This would have double effect on statistics. On one hand, each case in which decision was overthrown on appeal would reappear as "new" case at trial level (which as discussed earlier, explains why there are consistently more cases decided than cases indicted). On the other hand, each conviction and sentence that was confirmed would reflect on statistics as new offender "entering" prison, even though they were effectively in prison for years already. Faster process at the Court of Cassation would lead to an increase in the prison inflow statistics. Given that all homicide cases are automatically appealed, this would have particularly large effect on homicide, and this is exactly what is observable from data.

Again, as with the prosecution and trial data, prison data are complicated by

69 Ceza ve Tevkif Evleri Genel Müdürlüğü, 'İstatistik' <www.cte.adalet.gov.tr/menudekiler/istatistikler/yeni_yillar.asp> accessed 4 December 2018.

70 Mustafa Eren, '"Kaza"dan "Kampüs"e: Türkiye'nin Ceza İnfaz Sistemi' (2017) 2 Sosyal Hukuk 12.

administrative procedures that dictate who is counted, how, and when. More detail on the type of offence would give us somewhat more useful statistics, as currently it is unclear which offences are aggregate into "homicide" category. While these data provide a definitive count of people who are starting to serve prison sentence for homicide, those data carry very little information on the actual homicide rates, as they are removed from the homicide event by a number of administrative and judicial steps and processes. As a result these data are not good indicators of trends in homicide, and observable increases should not be taken as indications of increase in actual homicide rates.

3. Discussion and Conclusion

In this article, publicly available sources of data related to homicide in Turkey have been reviewed: Cause of death statistics, police statistics, prosecution and court statistics, and prison statistics. In a way, all data available between a homicide happening, and the end of the criminal justice process that could be used to estimate prevalence of homicide and its trends were reviewed. The goal was twofold: To provide an overview of publicly available homicide data for Turkey, and to identify homicide trends form those data. Hence on the one had this was an exploratory study, aiming to understand the availability of data, and explore advantages and drawbacks of trying to use any of those data sources when studying homicide trends in Turkey. On the other hand, an analysis on what can be concluded form those data regarding homicide trends in this country was provided. It is important to keep in mind that this study was limited to publicly available data. No doubt health, law enforcement, and justice agencies possess much more detailed information regarding homicide (incidence, offenders, as well as victims), that could be used for much more sophisticated analysis. However, those data are not easily (or even at all) available to researchers. Hence the goal was to limit this study to what is "out there".

As has already been discussed, all sources of data suffer from some common problems, even though the data are collected by completely different agencies and through different procedures. Changes in counting rules, for example, resulting in unreliable time-series, makes it hard to identify trends with confidence for cause of death data, police data, as well as conviction and prison data. This is not an uncommon problem, and it may not even be caused by the national agencies themselves (for example shift from ICD 8 to ICD 10 for cause of death data). Attempts to improve the quality and usefulness of data, and attempts to improve and streamline data collection

itself may also prompt agencies to change what they count, and how they produce their statistics. For example, National Judiciary Informatics System (*Ulusal Yargı Ağı Bilişim Sistemi*, UYAP), a centralized on-line case processing management system for documentation generated through judiciary, was launched in 2000 and over time it became an integral part of e-government mechanism, connected with many other government databases. Its use has resulted in immense changes in how judicial system operates, and also what data is collected and what statistics are producible.

Secondly, administrative nature of the data that is collected makes it easy to question its validity as a source of information regarding homicide as a criminal phenomenon. Prosecutors count "decisions", courts count "measures", prisons count "prisoners whose stratus has changed". Consequently, one must be cognizant of the fact that any changes in trends may have little to do with homicide trends, but may rather reflect administrative and operational changes in the agencies that collect the data. The fact that changes in the administration directly affect the collection of data, as well as the nature and scope of data collected, further exacerbates this problem.

Keeping all this in mind, the safest conclusion would be that after reviewing all those data, we still know very little about prevalence of homicide in Turkey, or any related trends. Never the less, it is possible to review the data step by step, and identify some possible indicators.

The first noticeable thing is that death, police and then judicial statistics do not show the expected attrition effect. In fact, for any year for which data are available, there are more decisions to indict for homicide than police recorded homicides, and more police recorded homicides than deaths determined as caused by homicide. The opposite should be the case. However, prosecution data includes attempted homicides, while police data do not, which explains the lack of attrition at that stage. Research focusing on European countries indicated that inclusion of attempts into homicide statistics doubles the rates,[71] even though there is great variation among different countries. This could easily explain apparent lack of attrition between police and prosecution data. Previous research had found that cause of death data generally show much higher homicide rates, than police data do.[72] Hence, the lack of attrition between

71 Ineke Hael Marshall and Diana L Summers, 'Contemporary Differences in Rates and Trends of Homicide Among European Nations' in Marieke CA Liem and William Alex Pridemore (eds) *Handbook of European Homicide Research* (Springer 2012) 50.

72 Beata Z Gruszczyńska and Markku Heiskanen, 'Trends in Police-Recorded Offences' (2012) 18(1) European Journal on Criminal Policy and Research 83.

cause of death and police data for Turkey points to a different kind of a problem. While, for example, the number of deaths identified as homicides in 2012 was 944, number of homicide victims (police data) for the same year was 3216. While both refer to victims, and therefore are counting the same things, numbers clearly do not match. This clearly points to problems with cause of death data in Turkey, at least when it comes to homicide. It would be very useful to track cases that were identified as homicide by police, and explore how cause of death was recorded for those cases.

Expected attrition, however, is observable between indictment and sentencing data. For comparison purposes those are all shown together in Figure 9.

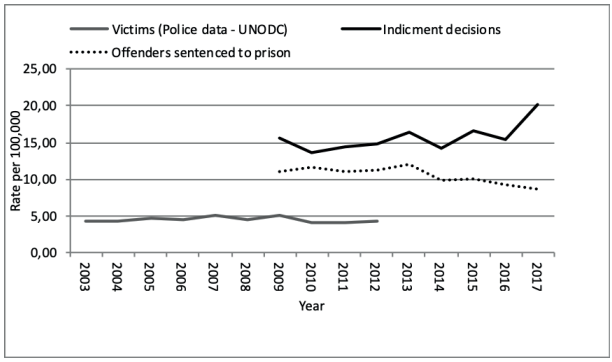

Figure 9. Rates (per 100,000) of police recorded homicide victims (UNODC data), homicide related indictments, and prison sentences rendered (2003-2017).

While the difference in absolute numbers between police and judicial data can be attributed to the inclusion of attempted homicide in prosecution and sentencing statistics, all three of those types of data show different trends: Police data show rather stable homicide rates (up until 2012 at least, with the last know homicide rate of 4.25), prosecution data show a trend upwards, and sentencing data show a downwards trend. It is notable that trends in prosecution and sentencing data are more apparent after 2012, and therefore it would be interesting to see what trends will be observable from police data since 2012, if those data ever become available.

In conclusion, most of the problems with data discussed in this paper are not unique to Turkey. Yet, the lack of access to police data is notable. Police level data are systematically collected in most countries,[73] and data are usually relatively accessible. Yet in Turkey police publishes practically nothing, and shares only the minimum with

73 Aebi and others (n 19)

Eurostat and UNODC. This is clearly something that needs to be changed in order to develop better insight into crime trends in general.

Lack of access to raw data and data collection instruments when it comes to data collected from the judicial system makes it impossible to conduct more complex analysis, that could provide us with better understanding on how cases are processed, and counted. It is understandable that government agencies would not want to publicly share raw data, yet it could be possible to develop research projects that would allow for collaboration between researchers and relevant agencies. Such collaborative efforts could produce very useful analysis of the judicial case processing, providing far deeper insight into the criminal justice system in Turkey.

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