Mortality among former youth offenders

Abstract The objective of this article is to analyze the detention of youth offenders involved in the juvenile justice system in the State of Rio Grande do Sul (FASE-RS), the reason for detention, and mortality among former young offenders. We conducted an observational study with youth offenders discharged from facilities run by FASE-RS in Porto Alegre between 2002 and 2012 (n = 8,290). We collected the following information: date of discharge, offence committed, skin color, gender, and duration of detention. The data was crosschecked with data from the state’s Mortality Information System to identify deaths among former young offenders up to December 2014. The predominant offences were crimes against property and drug-related crimes. The large majority of youth detained for drug-related offences were admitted for offences related to drug trafficking. There was a seven-fold increase in drug-related offences over the period. Death was associated (p<0.001) with being male and number of reentries (>3). The sample’s mortality rate was high and the main cause of death was homicide. The findings suggest that young offenders face high levels of psychosocial vulnerability. There was an association between minor crimes and high rates of mortality among former young offenders.

Key words Youth, Institutionalized, Detainees, Mortality, Homicide
Introduction

The youth mortality rate is high in Brazil and disproportionate across different social classes. Influenced by social, economic, cultural, environmental, and subjective factors, the risk of death is disproportionate among individuals and communities less exposed to protective factors.

Brazil’s penal code defines that all individuals aged under 18 at the time of an act or omission are not imputable, that is, they are not criminally responsible for their acts. The prosecution of youth offenders is governed by the Child and Adolescent Statute (ECA, acronym in Portuguese), which defines how youth in conflict with the law shall be held accountable for their actions, considering their stage of development, legal rights, and procedural guarantees.

Child and adolescent are defined in article 2 as follows: “For the purposes of this law, a child is considered to be a person aged under twelve years of age and an adolescent is a person aged between twelve and eighteen years”. Thus, the punishment of offenders aged between 12 and 18 is governed by the ECA, through the application of “socioeducational measures”.

Created in 2002, the Rio Grande do Sul State Socioeducational Service Foundation (Fundação de Atendimento Socioeducativo do Rio Grande do Sul - FASE-RS) is responsible for imposing socioeducational measures in closed and semi-open detention facilities, where youth may be detained for a maximum of three years or up to the age of 21. The services provided by FASE-RS are governed by the Program for the Execution of Closed and Semi-open Socioeducational Measures (Programa de Execução de Medidas Socioeducativas de Internação e Semiliberdade - PEMSEIS), underpinned by the core principles set out in the Individual Service Plan (Plano Individual de Atendimento - PIA). In January 2012, the government introduced Law 12.594, creating the national juvenile justice system or National Socioeducational Service System (Sistema Nacional de Atendimento Socioeducativo - SINASE), which standardizes the treatment of teenagers in conflict with the law and the prosecution of offences.

Studies show that detained youth are predominantly black, from vulnerable social groups, unemployed, have not completed primary school, and were not attending school at the time the offence was committed. The study O Mapa da Violência de 2016 (Map of Violence 2016) reported that young people aged between 15 and 29 years accounted for 58% of firearm homicide victims, despite making up only 26% of the overall population. However, despite the importance of this issue, few studies in the public health literature specifically address mortality in this highly vulnerable age group and the complex sociodemographic factors involved. This study analyzes the detention of youth offenders in socioeducational facilities run by FASE-RS, the reason for detention, and mortality among former young offenders. This work is important due to its originality and the notoriety that this topic has gained in the national media, generating debate about the rehabilitation of youth offenders and reduction in the age of criminal responsibility. More than a simple description of the situation, this work seeks to take an unprecedented multidisciplinary look at youth deprived of liberty, helping to gain a better understanding of this phenomenon.

Methods

We conducted a descriptive observational exploratory study with youth offenders discharged from facilities run by FASE-RS in Porto Alegre between 1 January 2002 and 31 December 2012. In cases of youth offenders reentering facilities, we used the date of the last discharge.

Our sample included youths complying with socioeducational measures in facilities in Porto Alegre, capital of the State of Rio Grande do Sul, including those detained in custody for a maximum of 45 days awaiting sentencing. Youth without/with incomplete information on maternal filiation and/or date of birth were excluded.

The data were obtained from FASE/RS’s database managed by the Rio Grande do Sul State Data Processing Company (PROCERGS).

The full name of each youth was crosschecked with data from the state’s Mortality Information System (SIM) provided by Health Information Center. The names were crosschecked using name, date of birth, and maternal filiation to avoid identification errors. To enable the observation of youth offenders discharged in 2012, the analysis of mortality used data for the period 2002 to December 2014.

Study variables

Offence: offences were divided into four categories based on the legally protected interest, or those interests defined by the Penal Code as warranting protection.
- Against the person: including crimes against life and endangering life and health, bodily injuries, affray, and crimes against honor and individual freedom.

- Crimes against property: theft, robbery and extortion, usurpation, damage, embezzlement, theft by deception and other frauds, and receiving stolen goods.

- Drugs: drug-related crimes, whether selling or personal use, set out in law 11.343/06 (currently in force) or in the legislation in force at the time of the offence. The legally protected interest in these cases was public health, given that the consumption of psychoactive substances is harmful to health.

- Other reasons for detention: offences that do not fall within the above categories, such as indecent assault and rape, and detention “not related to offences”: reentry to the facility at the youth’s request, non-compliance with a previously imposed measure, failure to return to a semi-open facility, and escape from the detention facility.

**Cause of death:** classified into the following categories:

- Homicide: assault inflicted through any means by another person resulting in death. This category includes death resulting from legal interventions (caused by state agents in the discharge of their duties).

- Suicide: including intentional self-harm or poisoning.

- Other causes: causes not included in the above categories, such as drowning, disease, and transport accidents.

The following demographic variables were used: skin color (white/non-white), sex (male/female), and age at admission (considering the first admission in cases of reentry).

The procedural variables used were: reason for detention (based on the above offences), total duration of detention in years, and number of entries/reentries. The duration of detention was presented as total time spent detained, which may exceed the three years (1,096 days) established by the ECA because the database we used does not specify the individual duration of successive reentries.

The quantitative variables were described as medians and maximum and minimum values in the case of non-parametric distributions. The categorical variables were described using absolute values (n) and frequencies (n%). The chi-square test was used to determine the difference between proportions. The relationship between the outcome (death) and the demographic and procedural variables was tested using the chi-square test.

This study was approved by the Hospital de Clínicas de Porto Alegre’s Research Ethics Committee.

**Results**

A total of 8,365 youth were detained in facilities run by FASE-RS in Porto Alegre between January 2002 and December 2012. Of these, 75 (0.89%) were excluded due to incomplete information on maternal filiation and/or date of birth, resulting in a final sample of 8,290 former young offenders. The youth were predominantly white and male. Age varied between 12 and 21 years (mean 17.1 years). The total duration of detention ranged from 1 and 1,832 days (median 48 days), with 4,000 (48.3%) of the youth being detained for less than 45 days (Table 1).

The percentage of detentions due to drug-related offences rose significantly over the study period from 3% in 2002 to 49.4% in 2012. Of the 1,299 youth detained for drug-related offences, 1,257 were admitted for offences related to drug trafficking (Figure 1).

There were a total of 784 deaths among the young offenders up to December 2014, which is equivalent to a rate of 9.45%. Frequency of death was higher among males, those who had spent more time in detention, and those with a higher number of entries into the system. Frequency of death was lower among youth offenders detained for drug trafficking. The leading cause of death was homicide and the frequency of suicide was high. No association was found between cause of death and reason for detention (Table 2).

**Discussion**

This study addressed an issue that is little discussed in the field of health, making youth offender mortality a public health problem that is neglected by the scientific community in Brazil.

The findings show that the mortality rate was high even among youth detained for minor offences, demonstrating that risk of death among youth offenders is high, regardless of the offence committed.

The data on the reason for detention show that the percentage of detentions for crimes against the person remained stable over the study
period, decreasing slightly, from 7% of all cases in 2002 to 6.4% in 2012, while detentions for crimes against property fell from 47% to 32.5%.

In stark contrast, detentions for drug-related crimes increased significantly over the period, rising gradually from only 3% in 2002 to 12.6% in 2007 and then showing a sharp rise to 49.4% in 2012. These findings suggest that hyper-decitation for drug-related crimes is not an isolated phenomenon, but rather associated with the introduction of the so-called "New Drug Law" (Law 11.343), leading to a sharp increase in youth detention, particularly those from more vulnerable social groups. Introduced in 2006 within a context of “harm reduction” at international level, the law adopts a medical-criminal approach where users, rather than being deprived of their liberty, are referred to the health system, while traffickers are imposed stricter penalties.

These findings suggest that the "New Drug Law" has failed, perpetuating Brazil’s highly punitive anti-drugs laws by neglecting to establish a clear distinction between user and trafficker. In this regard, the label of trafficker or user may be applied discriminatively, reproducing and deepening inequalities in drug control processes. Criminal behavior is viewed by many as a characteristic of underprivileged and marginalized groups, who are stigmatized as “dangerous classes". The image of the trafficker is produced

| Table 1. Relationship between demographic and procedural variables and death of youth offenders detained in facilities run by FASE-RS in Porto Alegre, 2002-2012. (n = 8290). |
|-----------------------------------------------|----------------|----------------|
|                                               | n (8290) | %      | n   | %   | P       |
| Skin color                                    | 0.832    |        |     |     |         |
| White                                         | 4368     | 53.7   | 413 | 9.5 |         |
| Non-white                                     | 3763     | 46.3   | 361 | 9.6 |         |
| Not informed                                  | 159      | 1.9    |     |     |         |
| Sex                                           | < 0.001  |        |     |     |         |
| Male                                          | 7490     | 90.3   | 756 | 10.1 |         |
| Female                                        | 800      | 9.7    | 28  | 3.5 |         |
| Reason for detention (crime)                  | < 0.001  |        |     |     |         |
| Against the person                            | 522      | 8.7    | 45  | 8.6 |         |
| Against property                              | 2776     | 46.5   | 249 | 9   |         |
| Drug-related                                  | 1299     | 21.7   | 98  | 7.5**|         |
| Other                                         | 1378     | 23     | 172 | 20.4*|         |
| Not informed                                  | 2315     | 27.9   |     |     |         |
| Duration of detention (days)                  | < 0.001  |        |     |     |         |
| <45                                           | 4000     | 48.3   | 323 | 8.1**|         |
| 45 – 180                                      | 1467     | 17.7   | 147 | 10  |         |
| 180-360                                       | 826      | 10     | 97  | 11.7 |         |
| 360 – 720                                     | 1370     | 16.5   | 145 | 10.6 |         |
| >720                                          | 627      | 16.5   | 72  | 11.5 |         |
| Age at detention                               | 0.056    |        |     |     |         |
| 12-15 years                                   | 727      | 8.8    | 51  | 7   |         |
| 15-18 years                                   | 6042     | 72.9   | 581 | 9.6 |         |
| 18-21 years                                   | 1521     | 18.3   | 152 | 10  |         |
| Number of entries                             | < 0.001  |        |     |     |         |
| 1 entry                                       | 4861     | 58.6   | 392 | 8.1**|         |
| 2 entries                                     | 1810     | 21.8   | 184 | 10.2 |         |
| ≥ 3 entries                                   | 1619     | 19.5   | 208 | 12.8*|         |

* Positive association using the adjusted residuals test (5% significance level)
** Negative association using the adjusted residuals test (5% significance level)

Source: SIM/NIS/DGTI/SES/RS.
through a process of diffuse discrimination and fear, whereby non-traffickers are often confused with traffickers.

Drug trafficking is inherently violent, both due to battles over territory and police repression. Thus, in a context of conflict, it is to be expected that mortality rates are higher among youth involved in drug trafficking than in those involved in other crimes. The fact that our findings do not show this association suggests that the youth of our sample detained for drug-related offences may be users rather than traffickers and therefore not involved in the systemic violence associated with the drug trade. In this regard, studies suggest that the consumption of illicit and licit drugs is a risk factor for violent behavior among youth, since it harms interpersonal relationships, hampers the adoption of a routine and activities that

Figure 1. Reason for detention in facilities run by FASE-RS in Porto Alegre, 2002-2012.
Source: SIM/NIS/DGTI/SES/RS.

Table 2. Relationship between reason for detention and cause of death of former offenders detained in facilities run by FASE-RS in Porto Alegre, 2002-2012. (n=784).

<table>
<thead>
<tr>
<th>Reason for detention</th>
<th>Against the person (n = 522)</th>
<th>Against property (n = 2776)</th>
<th>Drug-related (n = 1299)</th>
<th>Other reasons (n = 1378)</th>
<th>Not informed (n = 2315)</th>
<th>Total (n = 8290)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicides</td>
<td>40(7.66)</td>
<td>209(7.52)</td>
<td>89(6.85)</td>
<td>133(9.65)</td>
<td>185(7.99)</td>
<td>656(7.91)</td>
</tr>
<tr>
<td>Suicide</td>
<td>2(0.98)</td>
<td>5(0.18)</td>
<td>0</td>
<td>9(0.65)</td>
<td>3(0.13)</td>
<td>19(0.23)</td>
</tr>
<tr>
<td>Other causes of death</td>
<td>3(0.57)</td>
<td>37(1.33)</td>
<td>9(0.69)</td>
<td>28(2.03)</td>
<td>32(1.38)</td>
<td>109(1.31)</td>
</tr>
<tr>
<td>Total</td>
<td>45(8.62)</td>
<td>251(9.04)</td>
<td>98(7.54)</td>
<td>170(12.33)</td>
<td>220(9.50)</td>
<td>784(9.45)</td>
</tr>
</tbody>
</table>

Source: SIM/NIS/DGTI/SES/RS.
improve health and academic performance, and undermines the reintegration of young offenders into society\textsuperscript{10}.

Homicide can be divided into a number of legal categories and is an indicator of level of violence and risk of homicide in a given area\textsuperscript{11}. Youth homicide has been associated with social deprivation, lack of protective factors, and poor access to education, health, and decent housing\textsuperscript{12}. The lack of support networks is another factor that makes youth more likely to adopt high-risk lifestyles and may contribute to criminal behavior\textsuperscript{3,14}. Arruda da Silva et al.\textsuperscript{15} observed that 36.9\% of a sample of 800 young people in a youth protection facility had been abandoned by their family, showing that they were exposed to multidimensional violence influenced by a complex set of socioeconomic factors.

At national level, increases in homicide rates have been more pronounced among youth than in the overall population. In Rio Grande do Sul, the homicide rate among young people (15-24 years) rose from 35.9/100,000 in 2002 to 42.7/100,000\textsuperscript{16} in 2012, compared to 18.3/100,000 and 21.9/100,000, respectively, in the overall population. In Brazil, the homicide rate among young people in 2014 was 54.5/100,000, compared to 27.4/100,000 in the overall population\textsuperscript{7}. In the State of Rio Grande do Sul, youth offenders are more likely to be killed than to kill, accounting for only 8\% of crimes recorded by the police\textsuperscript{4}.

The national literature on youth offender homicide is scarce, reinforcing the importance of the present study. At international level, a study conducted by Aalsma et al.\textsuperscript{17} with a sample of 49,479 youth from a retrospective cohort study of youth involved in juvenile or adult criminal justice systems in the United States reported that there were 518 youth offender deaths. The researchers also reported an association between the extent of involvement in the justice system and mortality. The mortality rate varied between 90 and 313/100,000 (the latter rate among youth judged in the adult criminal justice system), indicating that the greater the extent of an individual’s justice system involvement, the greater the risk of death. However, the study did not determine the cause-and-effect relationship. A study by Teplin et al.\textsuperscript{18} examining mortality rates among 1,829 youth offenders in the United States over a 16-year follow-up period reported only 65 deaths (281/100,000), 90.1\% of which were due to homicide.

The variables and samples of the above studies show major similarities to the present study, despite the differences between the two countries’ justice systems and societies. The difference in mortality rates between the studies is striking (9.45/100 in the present study, compared to 0.313/100 and 0.281/100, respectively, in the studies conducted by Aalsma et al.\textsuperscript{17} and Teplin\textsuperscript{19}), illustrating that Brazilian youth offenders face a significantly greater risk of death. Our study revealed a relationship between number of reentries and death, showing that risk of death was greater in youth with three or more reentries, with 208 (12.8\%) deaths among this group of 1,619 youth offenders, 157 of which were due to homicide.

In addition to the association with homicide, the data show that youth with a higher number of reentries were more likely to commit suicide. According to Durkheim, suicide refers to “all cases of death resulting directly or indirectly from a positive or negative act of the victim himself, which he knows will produce this result”\textsuperscript{19}. Its occurrence generally involves predisposing psychological factors, combined with social risk factors associated with groups at extreme ends of the spectrum (for example, very rich and very poor and young and old age groups) and other factors such as lack of affective bonds, unemployment, absence of religion, and troubled family relationships\textsuperscript{20}.

According to data from country’s national health information system, DATASUS\textsuperscript{16}, the average suicide rate between young people aged between 15 and 24 years between 2002 and 2012 was 15.68/100,000, which is approximately 155 times less than our sample’s suicide rate. It is evident that prisons receive population groups at high-risk of suicidal behavior (men, young people, people prone to depression and with psychotic disorders, drug users, etc.), meaning that the rate of prison suicides is higher than that of the general population\textsuperscript{21}.

In the case of youth, it is important to consider family issues and support networks. The family is an important environment for socialization and humanization and one of the matrixes for the civilizing process. Apart from responding to transformations, families are creators of new social, economic, and demographic references\textsuperscript{22}. Gonçalves Zappe et al.\textsuperscript{23} point out that youth offenders frequently face family dysfunction from the formation of the mother-baby bond through to adolescence. In this regard, a study comparing young people and adults exposed to and not exposed to violence found an association between the presence of family violence and unfavorable...
mental health outcomes, such as alcoholism, depression and anxiety, contributing to the risk of suicide.

A study with 143 young people involved in the justice system in Porto Alegre (FASE) revealed that 17.8% of youth offenders reported suicide ideation associated with a range of factors, including deficient support networks, low levels of education, lack of future prospects, and early onset of drug use. In this regard, it is important to highlight that young offenders face not only the dilemmas of adolescence, but also the difficulties imposed by the correctional system. Furthermore, the same study reported that 74.8% of the young offenders had experienced the death of someone important, showing that violence is present from an early age and that this, combined with other childhood adversities, is associated with suicide ideation and attempted suicide.

The fact that our findings show that the detained youths were predominantly white (53.7%) should be considered in light of the overall population in Rio Grande do Sul. According to the 2010 census conducted by the Brazilian Institute of Geography and Statistics, around 80% of the population was white. This therefore suggests that the percentage of white youth in the juvenile justice system is disproportionately low, which is consistent with the findings of previous studies in the state. These findings reinforce evidence that non-whites are more vulnerable, which should be taken into consideration in policy formulation.

The large majority of our sample were male (90.3%) and being male was associated with the outcome death. This may be explained by the model of masculinity prevalent in Brazil, which is heavily loaded with violence, transmitted to boys and encouraged from a young age through socialization. This mortality profile is consistent with models in other countries, which also show that boys and young males are more vulnerable.

Within this context, the findings of this study make important contributions to the issue of the age of criminal responsibility. Various arguments for reducing the minimum age lead a large part of society to support this idea. A recent survey showed that 87% of Brazilians are favorable to reducing the age of criminal responsibility from 18 to 16. Arguments include the use of young people by criminal groups to commit serious offenses, meaning that many crimes are not being properly prosecuted, and shortcomings in the application of socioeducational measures.

The present study presents a picture in which youth offenders are at high risk, in stark contrast to the seriousness of the offences committed. These findings provide a strong argument against reducing the age of criminal responsibility, considering that the adoption of this measure is likely to result in a rise in mortality rates among vulnerable youth. It is necessary to systematically highlight the association between youth offending and social vulnerability and the importance of targeting relevant policies at vulnerable groups. In this regard, it is worth quoting Vaz and Moreira: “the age of criminal responsibility emerges as a seductive and desperate attempt by a society that fails to fulfill its social responsibility towards children and youth”.

The main limitation of this study was the lack of information on family structure, level of education, and circumstances after leaving the facility. Despite, former young offender support programs and policies, this information was not available. Furthermore, we did not have access to the legal proceedings related to violent deaths. Study strengths include the comprehensiveness of our data and the length of the time series.

Conclusions

Brazil does not have a tradition of promoting child and youth policies that go beyond formal education. This has only taken place more recently, with the advent of the Child and Adolescent Statute.

The simple fact that data on youth offender mortality in the national literature is scarce illustrates the need for further research in this area. Most of the literature focuses on the reasons for detention, rather than the future of youth offenders, demonstrating a lack of concern with the evaluation of policies directed at this group.

Our findings suggest the need for youth offender follow-up programs combined with the creation of an effective support network. Within the context of FASE-RS, practices and approaches to dealing with youth violence and the constraint and detention of individuals in the stages of neuropsychological development should be reviewed, using alternative approaches aimed at promoting holistic youth development. It is important to note that some states, including Rio Grande do Sul, already have ex-offender assistance programs with interdisciplinary teams that provide psychosocial and legal support; however, there is much room for improvement. Finally,
this study highlights the lack of effectiveness of policies directed at this highly vulnerable group, the majority of whom are involved in minor crimes and condemned to a high risk of death.

**Collaborations**

VM Silva participated in data collection, reviewing relevant literature, and in the drafting and revision of this article. PV Teichmann participated in reviewing relevant literature and in the drafting and revision of this article. T Scanlon, JVT Santos and MZ Goldani participated in study conception, elaboration, and coordination.
Referências


