

An approach to suicide among adolescents and youth in Brazil

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Abstract *This essay article examines suicide among young people in Brazil on the basis of Durkheim's classical approaches as revisited in current discussions of social integration networks. It presents arguments regarding the behaviour of suicide mortality rates in the light of classical public health assumptions as to social causality in processes of health and illness. The mortality rates, updated in line with international statistics, review of data in Brazilian studies and recent series for Brazil, reveal suicide "aptitudes" by age, sex and social group. The linear and non-linear nature of the trends are treated in the context of pathways in complex social systems. Current data were prospected in the Ministry of Health's National Mortality Information System and World Health Organisation databases. In this policy analysis study, a conceptual outline was built up from classical theory updated to the present-day context, analysis of data relevant to the study object and observation of target groups for comprehensive, inclusive policies. The results of this analysis reveal that adolescents and young people are highly liable to growing, sustained, high-impact vulnerability to suicide.*

Key words *Durkheim, Suicide, Youth*

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Introduction

Suicide is one of the oldest health issues involving individuals and how they are affected by the collectivities and societies they live in. History identifies it as socially important since Ancient Greece. In modern times, since at least the eighteenth century, it has been treated as a social phenomenon and addressed from various historical, sociological, economic and philosophical perspectives.

Students of suicide endeavouring to understand its radical nature have aligned – historically and schematically – with positions ranging from those that consider it the most individual of human acts through to those that understand it as resulting from social pressures (undermining individuality as a cause), by way of others intending, in different and largely unrelated manners, to interconnect the individual and social dimensions.

Prominent among those that concentrate on the individual dimensions of suicide is a focus on individual clinical aspects, usually examined in aggregate form by specialities such as epidemiology and public health. In these cases, suicide is regarded as an individual health disorder and analysed by mental health professionals and the various schools of psychiatry and psychology.

While not disdaining these explanations, Durkheim¹ stands at the other extreme. Concerned to establish the bases of sociology as a social science, he considered that the cases of suicide where individuals display mental disorders are indeed cases for psychology. However, he argued, “each society, at each moment in its history, has a definite aptitude for suicide”, a phenomenon comprising people who do not display mental disorders. In these cases, suicide is the result of the pressure for order that social cohesion exerts on individuals. Here, there is no question of individual health problems, but social and economic problems.

To some extent, the expanded concept of health expressed at Alma-Ata and the incorporation of social determinants situate public health – whose origins rest on the pillars of medicine, the social sciences and epidemiology – as the field that endeavours to produce a synthesis of these two major explanatory approaches to suicide. Although there is no unity among students in this field to interconnect the different manners of producing that synthesis, it is possible to perceive a generic consensus on understanding suicide as an individual question with social causes.

Situated in that field, this article aims to con-

tribute to an improved understanding of suicide among adolescents and youth in Brazil. To that end, it (i) organises – in essay form – a conceptual contribution based on the work of Durkheim and those who have updated his work; (ii) situates and analyses the Brazilian suicide data in the international context; (iii) investigates Brazilian academic production, with a view to highlighting the main studies of suicide among adolescents and youth and extracting epidemiological data and historical series from them; (iv) examines Brazil’s Mortality Information System (*Sistema de Informação de Mortalidade*, SIM) for data that permit a more current characterisation of suicide among adolescents and youth; and (v) analyses those data on a conceptual basis developed to identify potential for explaining suicide of adolescents and youth in a contemporary society.

The Sociology debate triggered by Durkheim and its implications for Brazilian studies

In 1895, Durkheim, one of the founders of sociology as a social science and responsible for its entry into the university context in Europe, published “The Rules of Sociological Method”, in which he explained that sociology’s object of study are “social facts”, which are not reducible to the products of individual thought and volition, and are thus treated as ‘things’. As a result, they are external to individuals, on whom they impose themselves; that imposition exerts pressure and constraint on individuals in such a way as to order their lives.

Applying methodological rigour, Durkheim devoted himself to studying suicide, partly to demonstrate how what is regarded as the most radically individual human act can be examined as a social fact. He intended, in that way, to show that the causes of suicide are social in nature.

In 1897, he published the findings of this studies of suicide, and presented a theory that displays explanatory vigour to this day. This article is intended to contribute to further clarifying that capacity, which also means pointing to gaps and suggesting future investigative steps.

In “Suicide”, Durkheim develops the central thesis – still surprising today – that there is a regular contingent of suicides in each society and that regularities can be identified so as to determine the social causes of suicide by social groups, communities or nations:

...the term suicide is applied 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.

... If, instead of seeing them only as particular occurrences, isolated from one another and each to be studied separately, the suicides committed in a given society during a given period of time are taken as a whole, it appears that this total is not simply a sum of independent units, a collective total, but is itself a new fact sui generis, with its own unity, individuality and consequently its own nature – a nature, furthermore, dominantly social...

At each moment of its history, therefore, each society has a definite aptitude for suicide¹.

By rigorous, but creative use of the available descriptive statistics, Durkheim developed a typology of suicide based on the leading role of social causes and the subordination of the myriad individual cases to the social, political and economic environment: suicides were egoistic (resulting from excessive individualism and loss of collective ties); altruistic (from excessive subordination and loyalty to social structures, by honour and heroism); or anomic (in generalised social crises and poor regulation).

As each society has its own suicide rate, there is an economy that balances that rate and the ratio among types of suicide. Accordingly, the problem for the sociologist is to understand the (of course, social) causes that lead to increases in suicide rates, because ultimately they indicate that social cohesion is losing its power to organise life – which, in Durkheim's theory, constitutes the great risk that societies live with.

Writing at the turn of the nineteenth to the twentieth century, contemporary with the sweeping social changes of the time, Durkheim identified rising trends in suicide rates in Europe. He did not, however, support the explanations that attempted to associate what were then new forms of behaviour with weakening social cohesion, which found expression in conservative measures, such as efforts to prevent divorce so as to preserve family ties, to restore the primacy of the religious order over politics and to curb workers' organisations.

On the contrary, he saw the accelerating professionalisation of his time as offering the opportunity to reform the former corporative code based on closed communities (guilds and the like) and the potential of the new corporative identities as the basis for forming collectivities superior to family, religion and nation. These advances – which he identifies as the passing from the mechanical solidarity of older societies to the organic solidarity of what have become modern

societies – he does not consider socially destabilising. Rather they are motivators of social cohesion and, accordingly, not to be considered causes of increased suicide.

In Brazil (as in the rest of the world), Durkheim's ideas had repercussions in the human sciences environment, including the health sector, and underwent substantial updating because of the restructuring of the debate over euthanasia and bioethics as a whole.

As noted by Nunes², Durkheim did not invent the social explanation of suicide, which was already ongoing on the basis of moral theories, but he was the theoretician who developed a coherent model. Moreover, in addition to proposing an explanatory model anchored in objective data on suicide in various countries and regions, his work ushered in the coherent explanation of social events based on evidence and telling argumentation. One of the high points of his study is the use of available statistics (which were not always corroborated after the fact). In contemporary terms, it was a precursor of multi-causal problem analysis.

At the root of this theory is the controversial relationship between individual and society and the question of how far societies are influenced by the primacy of one over the other. The debate over relations between individualism and the de-structuring of collectivities has been an important theme in contemporary sociology, particularly in discussion of post-industrial societies. Important authors to have studied the subject include Offe³, who was important in updating the discussion, and Putnam⁴, who studied social protection networks and how they reflect in the quality of public policymaking and the lives of individuals.

One influential study by Berkman et al.⁵ reviewed the specialised post-war literature which reapplied Durkheim's theses in relation to social determination in the effects of social relations on health, behaviour and the formation of social identities. It argued that social networks affect the behavioural base by mechanisms affording access to resources available in society and by social ties in the form of engagement, support and influence. The analyses and controversies observed among the various approaches to social networks and health as to the structure, processes and mechanisms of influence should be viewed in the light of the notion that, on this subject, "Network theorists share many of the central assumptions of Durkheim and the structure functionalists"⁵.

The conceptual model of Berkman et al.⁵ was grounded on explanatory chains resting on struc-

tural social conditions that affect social networks. These generate opportunities for the action of psychosocial mechanisms that affect health along pathways of determination. On pathways relating to an action plan at the micro level, health effects are seen to occur in behavioural, psychological and physiological terms.

The synthesis offered by Berkman et al.⁵ constituted a discursive validation and updating of Durkheim's theses to explain, as they indicated, "one of the most psychological, intimate, and, on the surface, individual acts" as a social fact. In line with the sociological tradition predominant at the start of the twenty-first century, it placed the formation of social integration networks at the centre of the explanation of processes of health and disease.

Fifteen years later, the effects of this conjugation between the Durkheim model and this explanatory model of how social networks influence health led *Social Science and Medicine* – one of the world's leading international journals in the study of health on the basis of sociological categories – to publish a commemorative issue emphasising that these authors "not only captured the spirit of Durkheim but also leveraged rapidly developing methodological and computational advancements"⁶.

Meanwhile, Durkheim's ideas, as expressed today more directly in the protective health effects of social cohesion factors, can be preserved fundamentally intact, even though controversies do exist over the conclusions of his classic book. This is true of the various publications that have reproduced his statistics in the present day using currently available information processing and big data resources. Also, original interpretations based on his data can be contested.

Kushner & Sterk⁷, for example, argued that, by not using the data available at the time for attempted (failed) suicide by women, Durkheim minimised women's suffering in the family and the protective function attributed to that environment against the egoistic type of suicide. The same would apply to the altruistic and military types and, accordingly, the mechanisms of social determination would be of a different order and the characteristics of the social connections with health would be more complex.

As regards complex societies and the relations among communitarianism, social capital and beneficial health effects, as reflected in the agenda dominant in public health and strongly influenced by discourse drawing on Durkheim, connections can be identified on the macro-in-

stitutional plane in developed countries. Johnson et al.⁸ note that, despite the observed relation among social protection, communitarianism and favourable health outcomes, quite different institutional patterns, such as application in law (common law versus civil law), produce different outcomes not directly aligned with the dominant model, although better outcomes are observed in Scandinavia for the main societal variables.

The excellent study by Condorelli⁹, representing present-day analyses at the international level, applied complexity theories for a more current reading of Durkheim's theses on the adverse effects of modernisation and individualism in the disintegration of traditional protection networks. Of particular note – and of more direct relevance to the aims of this article – is the non-linear nature of these effects in contemporary societies. Using advanced data and mathematics, the study indicates that the effects of individualisation on suicide in different societies are not indefinitely additive (or linear)⁹. In developed societies, adaptive mechanisms observed in long series show that, after a certain threshold, there is minimal loss in protective social factors, while other social protection mechanisms act in such a way as to stabilise or reduce mortality rates.

Durkheim's ideas also had significant impact on the human sciences in Brazil, with intense echoes in public health, leading to this day to their methodological use and to population-based and time series studies to verify his initial findings. Controversies among the different fields of the emerging human sciences and their progressive subdivisions dominated sociological theory at the turn of the nineteenth to the twentieth century. Generally speaking, currents deriving from Durkheim, Marx and Weber formed the matrix for sociology as a speciality and profession. The repercussions in Brazil were very much associated with the development of Comtean positivist thinking, as discussed by Teixeira¹⁰. Possible points of contact between the thought of Durkheim and Karl Marx have also been discussed¹¹.

Although it is tempting to seek to update Durkheim's thinking when examining contemporary policies, that is not the aim of this article. As will be considered below, the excellent study by Gonçalves et al.¹², which actually examined statistics for the Brazilian case, essentially validated the findings of Durkheim's classic study. A number of articles published by Brazilian authors working from an epidemiological standpoint cite

that classic study as a point of departure for their thinking¹³⁻¹⁷.

As noted by Neto & Moreira¹⁸, what Durkheim intended was to demonstrate that such an individual act as suicide has unmistakably social roots and motivations. This article will discuss some of the roots and motivations of suicide among adolescents and youth in Brazil.

Suicide in the world and the situation of adolescents and youth in Brazil

The Brazilian data, when compared with those for other countries, enable the magnitude of the phenomenon to be gauged on a comparative perspective and reveal that our national rates are not among the highest. They do stand out, however, for comparatively very high growth among the younger population groups.

The World Health Organisation (WHO) compiles and publishes country data¹⁹. Figures calculated for 2015 and published in 2018 show a global average suicide rate of 10.7 per 100,000. Rates vary strongly by region, from the East Mediterranean (3.8), through Africa (8.8), the Americas (9.6) and Southeast Asia (12.9), to the highest prevalence observed, in Europe (14.1). In this light, the Brazilian rate of 6.3 is well below average, both globally and by major regions.

One important aspect is that global crude mortality from self-inflicted injuries had fallen from 12.2 per 100,000 in 2000 to 10.7. That reduction can be attributed to the substantial decrease in rates observed in low- and middle-income countries, accompanied by a small increase in high-income countries.

This can be seen when the global estimates of mortality from self-inflicted injuries are grouped, by national economy, on World Bank income criteria. The WHO figures show that the crude mortality rate in low-income economies declined from 9.0 per 100,000 in 2000 to 8.1 in 2015. Similar shifts occurred in lower-middle-income economies (from 12.2 in 2000 to 10.7 in 2015) and upper-middle-income economies (from 11.9 in 2000 to 9.8 in 2015). In high-income economies, the estimates showed a small increase in the rate, from 14.2 per 100,000 in 2000 to 14.5 per 100,000 in 2015. Even considering the major differences in suicide information systems and reporting cultures, the differences in suicide contingents by country are very evident.

The figures in Table 1 are illustrative and only more detailed longitudinal analysis can demonstrate whether or not suicide rates really are in-

cremental in nature. However, simply observing the data estimated for 2015 in countries that differ by continent, culture and political and economic system shows that suicide displays strong local characteristics. Therefore, beyond any biological or neurophysiological features that have been identified at the individual level, the differences observed, even among countries with closely similar types of development, in addition to sharing political and economic systems and geographical proximity, underline the involvement of social and cultural dimensions in these problems.

The data show that rates in Brazil are much lower than in other important South American countries, such as Argentina and Chile, or than in Mexico and other North American countries. In both cases, the Catholic dimension could be adduced, but that tradition in the formation of South America resists hasty conclusions. The data selected for Europe, a continent with strongly shared systems and values, show marked diversity and suggest the influence of factors. Rates in Africa are strikingly high, at odds with what is observed to be an association of suicide with higher income.

In order to understand the question of the contingents of suicides in each society, Table 1 shows an intentional sample of countries ranked by Human Development Index (HDI). From 2000 to 2015 differences can be seen between countries with similar HDIs and similar degrees of social development.

The data in Table 1 permit some important observations. Countries down to the Russian Federation comprise the very high human development group, where mortality rates observed for the series and for 2015 are not only quite different, but sustained over the period. For example, countries that share similar political and cultural systems, such as Germany, Denmark and Holland, display much lower rates than France and Belgium. Countries such as Japan, Hungary and the Russian Federation, which have different social, political and cultural profiles, display similar, very high suicide mortality rates. Among Latin American countries, the differences between the 2015 rates for Chile (9.90) and Argentina (14.20) are large. Brazil and Mexico, countries with high HDIs, share very low rates compared with the previous groups and are very different from Uruguay. As regards the selected medium-development countries (ranked from Botswana to India), the series are extremely country-specific and the differences very substantial.

Table 1. Mortality from self-inflicted injuries per 100,000, selected countries, 2000-2015, ranked by 2015 HDI.

Countries	HDI	CM	CM	CM	CM
	2015	2000	2005	2010	2015
Australia	0.939	13.40	11.90	12.10	11.80
Germany	0.926	14.60	13.60	13.50	13.40
Denmark	0.925	15.50	14.70	11.70	12.30
Holland	0.924	9.70	9.80	9.80	11.90
Eire	0.923	12.50	11.50	11.60	11.70
Canada	0.920	12.40	12.60	12.70	12.30
United States	0.920	10.80	11.70	13.00	14.30
Sweden	0.913	15.10	15.70	14.60	15.40
Japan	0.903	24.40	24.70	24.30	19.70
France	0.897	20.20	19.20	18.40	16.90
Belgium	0.896	22.60	20.50	20.30	20.50
Italy	0.887	7.50	7.20	7.00	7.90
Chile	0.847	10,80	10,30	12,00	9,90
Portugal	0.843	7.40	10.90	13.50	13.70
Hungary	0.836	32.40	26.30	25.50	21.60
Argentina	0.827	13.30	12.20	12.90	14.20
Russian Federation	0.804	38.70	33.60	25.70	20.10
Uruguay	0.795	16.30	14.90	16.40	17.00
Turkey	0.767	13.40	11.50	10.50	8.70
Mexico	0.762	3.40	4.00	4.20	5.00
Brazil	0.754	5.20	5.90	5.90	6.30
China	0.738	11.00	9.90	9.80	10.00
Jamaica	0.730	0.20	1.90	0.50	1.40
Botswana	0.698	11.50	11.20	10.20	9.70
Indonesia	0.689	3.10	3.20	3.10	2.90
South Africa	0.666	10.10	9.70	10.10	10.70
Namibia	0.640	10.00	9.10	8.70	7.70
India	0.624	17.80	17.50	17.10	15.70

Sources: WHO, UNDP/UN.

Obs.: HDI estimates for 2015.

Although Table 1 reflects an intentional selection, the pattern of diversity among national suicide contingents is the same for the set of countries when taken case by case.

Also for global population, Table 2 shows crude mortality rates for the short series from 2000 to 2015, by sex and age group. Major differences in suicide rates can be seen by sex, particularly among men, and rise after age 30 years. In all conditions, the pattern is for rates to decline over the period.

The Brazilian rates, as will be seen below, behaved differently from the global aggregates. Rising suicide mortality rates for the general population were accompanied by specific behaviour by age group and specific social groups.

In order to understand this complexity better, it is necessary to select particular studies, observe the cases and series studied and update them with data available in government information systems.

Suicide among adolescents and youth in Brazil and the implications for youth populations

The individual and social effects of suicide among Brazilian youth are examined on the basis of cases recorded as intentionally self-inflicted injuries. It must be remembered that lack of complete records is an important problem that goes beyond the gaps typical of such administra-

Table 2. Deaths from self-inflicted injuries, crude mortality rates per 100,000, estimates global totals, 2000-2015.

Sex	Age group	2000	2005	2010	2015
Total		12,22	11,61	11,23	10,73
Male	Total (all ages)	15,55	14,67	14,16	13,61
Female		8,84	8,51	8,26	7,80
Male	0-28 days	0,00	0,00	0,00	0,00
	1-59 months	0,00	0,00	0,00	0,00
	5-14 years	1,23	1,14	1,1	1,10
	15-29 years	17,12	15,6	14,84	14,06
	30-49 years	20,91	18,87	17,62	16,54
	50-59 years	25,98	23,47	21,72	19,74
	60-69 years	30,53	27,44	25,65	23,80
	70+ years	47,11	44,47	41,89	40,98
Female	0-28 days	0,00	0,00	0,00	0,00
	1-59 months	0,00	0,00	0,00	0,00
	5-14 years	1,13	1,07	1	0,92
	15-29 years	13,00	12,15	11,46	10,34
	30-49 years	9,47	8,81	8,21	7,65
	50-59 years	10,62	9,89	9,81	9,36
	60-69 years	14,50	13,57	13,32	12,92
	70+ years	22,25	21,33	20,48	19,74

Source: WHO, 2018.

tive data bases. For suicide, well known factors influence refusal to record, such as the effects of social and family stigma, religious considerations, protection relating to possible insurance claims, family suffering resulting from investigations and legal processes and other social issues.

Studies from primary sources – some highlighted below – are useful to circumvent these effects. On the other hand, long time series, administrative data bases (such as the SIM) and a selection of studies are helpful in analysing Brazilian country trends since the 1980s.

Chart 1 shows the results of a selection of the main Brazilian national studies of trends and characteristics of suicide among youth, by distributions even prior to the series inaugurated in 1996 with the use of the ICD-10, which serves as the source for this article. It also enables specific risk factors to be highlighted from some population-based studies.

The information shown in Chart 1 warrants certain conclusions:

(i) According to the three long national series cited – since 1980 for Brazil – there has been a sustained increase in overall mortality, while in two of them the variations were most substantial among young people;

(ii) The decreases in suicide-related hospital admissions should be adjusted for the overall decline in public sector admissions over the period²⁶, although attention should be given to the high impact of casualty and emergency care for children and youth;

(iii) The population-based studies in municipalities in south and southeast Brazil reveal risk factors associated with youth populations that deserve special attention, such as associations with sexual abuse, violence, drug use, depression, non-heterosexuality and sexual risk;

(iv) Association with higher income or not linked with decreasing income; and

(v) The major variations observed by states or municipalities suggest that, in a country the size of Brazil, regional and local differences may reproduce those perceived since Durkheim in smaller European countries.

Also, some of the findings in the longitudinal and cross-sectional studies shown in Chart 1 should be highlighted. One first observation has to do with the convergence among historical series (whether time/predictive or not) for national distributions, whether overall or stratified by sex and age group. The national data discussed in studies based on administrative data bases,

Chart 1. Suicide mortality rates among youth in Brazil, regions and municipalities, selected studies and findings

Year ^{reference}	Scope Findings	Results
1976-2001 ¹⁷	Campinas (SP)	Fall in annual rates for age 15 to 34 years; rates do not rise with lower socioeconomic position
1980-2000 ²⁰	Brazil	Increase of 21% in crude rate since 1980; greater risk for men and over-65 year age group; substantial increase among 15-24 year olds
1998-2002 ¹²	Brazil	Sustained increase in crude rates per 100,000 and spatial “contagion effect” for neighbouring areas
2002-2013 ²¹	Brazil	Hospital admission rates per 100,000 fell from 4.4 to 3.3 for 10-19 year olds and from 7.4 to 5.6 for 20-29 year olds; the overall rate declined
2004-2014 ²²	Brazil	Overall rate increased, with more marked increases for 10-19 year olds; rate for 20-29 year olds increased since 2010
2005 ²³	Pelotas (RS)	Prevalence of suicidal ideas at 14.1% among 11-15 year olds, associated with female sex, legal or illegal drugs and depression
2007-2008 ²⁴	Pelotas (RS)	Risk of suicide 8.6% among 18-24 year olds and more significant among victims of sexual abuse
2007-2008 ²⁵	Pelotas (RS)	Risk of suicide 8.6% among 18-24 year olds, associated with violence, drug abuse and risky sexual behaviour
2009 ¹⁶	Presidente Prudente, Assis e Ourinhos (SP)	Among 12-20 year olds, risk of suicidal ideas and attempts greater for non-heterosexuals, particularly bisexuals or “others”
2010 ¹⁵	States	Suicide related to high income and not correlated to homicide; major differences among states
2014 ¹³	24 state capitals and DF	In emergency and casualty departments, 0-9 year olds accounted for 2.9% of self-inflicted injury cases and 10-19 year olds, 18.8%

Sources: ¹⁷ Marín-León e Barros; ²⁰ Mello-Santos et al.; ¹² Gonçalves et al.; ²¹ Monteiro et al.; ²² Pinto et al.; ²⁵ Ores et al.; ¹⁶ Teixeira-Filho e Rondini; ¹⁵ Bando & Lester; ¹³ Bahia et al.; ²⁴ Mondin et al.; ²³ Souza et al.

however, tend to converge because the researchers used the same sources, while the differences relate to the periods studied. Some studies examined the series using self-correlation tests and other procedures so as to verify the predictive value and causality from the time series^{12,14,17}. Even the population-based studies, which are directed more to finding associations, in their preambles and analyses, used historical series drawn mainly from the Ministry of Health Mortality Information System (*Sistema de Informações de Mortalidade/Ministério da Saúde, SIM/MS*).

In all the longitudinal studies considered, rates of mortality from self-inflicted injuries can be seen to increase in Brazil, another common salient pattern being the growing share by different adolescent and youth age groups. The most robust, inclusive series find increasing risk at younger ages, following in the tradition of the specialised literature and international compared data.

In the cross-sectional studies based on administrative data¹³ or population data^{15,16,23-25}, the rates among the younger population generally behave in manners convergent with those from

the series data. However, these types of studies permit a more specific approach to the phenomenon among these populations, because they address associated variables more connected with the child and adolescent policy agenda in Brazil.

This can be seen in the admission of youngsters from 10 to 19 years old to casualty and emergency services, where (as mentioned earlier) they account for 18.8% of the self-inflicted injuries group¹³. In the 18 to 24 year age group, the high suicide risks among those who suffered some kind of sexual abuse²⁴ or were associated with a series of uncontrolled exposures to drugs and sex²⁵ are important considerations for health sector policies. Hazards associated with homoaffective-related gender issues were revealed by a population-based study¹⁶, and the same risks are observed for the depression category. These more specific population-based studies reveal important input to sociological explanations, because they relate to behavioural factors. The ecological studies also underline the influence of socioeconomic factors.

The theoretical underpinnings discussed above and the selected national studies form

the basis for an understanding of suicide among young people that the data below help to elucidate.

Suicide among adolescents and youth in Brazil, 1996-2015

When only absolute data on self-inflicted injuries in Brazil are considered, this gives the real scale of these problems, aside from any means used to estimate under-reporting. The 10th International Classification of Diseases (ICD-10) was released by the WHO in 1993 and statistics using this codification have been available in Brazil for the SIM series since the first major updating of the ICD-10 in 1996. For the twenty-year period from 1996 to 2015 when the ICD-10 was in use in Brazil, SIM data showed a total of 172,051 suicides. Of these, 52,388 cases (30.5%) were recorded in youngsters from 15 to 29 years old. Deaths from intentionally self-inflicted injuries in this period are important among external causes as a whole. For the period from 1996 to 2015, 2,656,876 deaths from external causes at all ages were observed in Brazil; of these, suicides represented 6.5%. When deaths from external causes among 15 to 29 year olds only are considered, suicides account for 5.2%. In overall mortality, intentionally self-inflicted injuries represent 0.8% for all ages, but 3.6% for the 15 to 29 year age group. It is important to note that, in Brazil, as in other countries, highest suicide mortality is found among the oldest, despite faster growth among the youngest.

These figures, aside from the individual and social effects of each observed death, reveal the importance of the issue in Brazil. In the national debate, a considerable literature on suicide is produced from different political, philosophical and epidemiological approaches. There is also an evident focus on vulnerable groups (indigenous and young people). Some of these studies, the more substantial and relevant to the aims of this article, were analysed and contributed to tracing a picture of the behaviour and present status of suicide in Brazilian adolescents and youth described in the previous section.

Analysis of the most recent data on mortality from self-inflicted injuries among Brazil's youth populations corroborates and complements the findings observed in these studies. The tables below display these data by age group, sex and colour and, in a more general sense, their findings can be explained by the type of approach adopted by Durkheim and by later developments

of the theory of social causes in the process of health and disease.

In line with the findings mentioned, both total mortality rates and mortality for either sex have increased gradually over time, with greater variation among males and in the 20 to 29 year age group. This is shown in Table 2, which gives crude rates of mortality from self-inflicted injuries and overall mortality for Brazil in the period from 1996 to 2015, focussing particularly on adolescents and youth.

From the data for adolescents and youth and for total population, presented by sex and age group, the behaviour of each group can be analysed in greater detail. First of all, it must be stressed that the coefficient of correlation between the general mortality rate and total self-inflicted injuries by sex was calculated at 0.9763. This indicates almost absolute correlation between these series for the period from 1996 to 2015.

Coefficients of correlation were also calculated, over the same historical series, by sex and age groups of adolescents and youth. For the 10 to 14 year age group, the correlation was weak (0.0942). Correlations were stronger for the more populous groups, however. For the 15 to 19 year age group, the correlation calculated was high (0.6531) and, for the 20 to 29 year age group, the pattern of correlation was almost absolute (0.9734).

Thus, it is only in the 10 to 14 year age group that mortality from voluntary self-inflicted injuries is dissociated from overall mortality. That is, in Brazil, suicide in younger populations tends to accompany the distribution of overall mortality by age and sex.

These findings suggest that the phenomenon, given its substantial importance and the trends observed, should be treated in the context of overall mortality. Growing overall mortality in a country undergoing rapid and ongoing urbanisation may be considered to carry suicide mortality among its youth in its wake as an associated factor attendant on a certain type of urbanisation accompanied by social exclusion in the distribution of resources and opportunities.

More specifically, the data in Table 3 show the impact on the 20 to 29 year age group and male sex. Rates for this group hold stable over the series studied, revealing a clear social contingent of suicides. The fact that rates for this age group have held stable, for over 20 years, at a plateau of around 10.0 per 100,000 demands attention. These data suggest that this young population is affected by

Table 3. Crude mortality rates, overall and from intentionally self-inflicted injuries*, per 100,000, by sex and selected age groups – Brazil, 1996-2015.

Year	Age group / Sex	Mortality from self-inflicted injuries				Overall mortality			
		10 a 14	15 a 19	20 a 29	Total (a)	10 a 14	15 a 19	20 a 29	Total (b)
1996	Male	0,75	5,32	10,28	6,89	52,25	164,13	299,05	684,46
	Female	0,58	2,23	2,26	1,77	31,86	56,53	85,94	472,83
	Total	0,66	3,78	6,22	4,29	42,16	110,36	191,09	577,18
1997	Male	0,57	4,66	9,96	6,98	48,95	168,26	295,74	671,49
	Female	0,61	2,12	1,98	1,76	29,02	53,54	80,72	461,82
	Total	0,59	3,39	5,92	4,33	39,08	110,93	186,82	565,20
1998	Male	0,53	4,85	9,61	6,93	44,60	169,02	292,74	681,12
	Female	0,51	2,17	2,39	1,78	29,60	54,10	80,92	471,82
	Total	3,35	9,78	5,45	4,32	37,17	111,57	185,44	575,03
1999	Male	0,51	4,65	9,35	6,56	43,48	167,62	285,43	677,35
	Female	0,40	1,62	1,82	1,48	27,36	50,96	76,14	469,20
	Total	0,45	3,13	5,54	3,98	35,50	109,30	179,41	571,84
2000	Male	0,47	3,80	8,79	6,46	43,53	165,51	277,24	660,63
	Female	0,49	2,04	2,06	1,60	28,84	48,55	71,51	456,50
	Total	0,48	2,93	5,39	3,99	36,27	107,35	173,46	556,97
2001	Male	0,61	5,23	10,07	7,28	43,72	165,87	274,83	661,33
	Female	0,61	2,49	2,04	1,78	26,56	47,66	69,28	456,49
	Total	0,61	3,87	6,02	4,49	35,24	107,08	171,14	557,32
2002	Male	0,59	4,74	9,80	7,01	41,77	169,96	286,25	664,72
	Female	0,61	2,24	2,36	1,91	27,75	45,98	70,05	463,21
	Total	0,60	3,50	6,05	4,42	34,85	108,30	177,18	562,40
2003	Male	0,59	4,75	10,14	7,19	40,25	162,06	283,10	669,37
	Female	0,50	2,28	2,42	1,79	25,38	46,18	69,09	466,23
	Total	0,55	3,52	6,25	4,44	32,90	104,42	175,13	566,23
2004	Male	0,48	4,60	10,09	7,16	39,22	157,12	275,49	673,43
	Female	0,65	2,15	2,26	1,88	24,91	44,51	67,87	472,43
	Total	0,56	3,38	6,14	4,48	32,15	101,10	170,74	571,37
2005	Male	0,53	4,27	9,90	7,44	37,81	152,70	259,57	642,22
	Female	0,58	2,13	2,26	1,93	23,98	41,27	65,76	453,48
	Total	0,55	3,21	6,04	4,64	30,98	97,26	161,78	546,40
2006	Male	0,60	4,42	10,18	7,43	36,57	150,27	259,52	645,80
	Female	0,63	1,96	2,19	1,90	24,47	40,71	65,27	461,31
	Total	0,61	3,20	6,15	4,63	30,59	95,75	161,51	552,13
2007	Male	0,77	4,79	9,79	7,52	41,34	169,97	246,86	647,66
	Female	0,62	2,10	2,36	1,94	26,77	45,52	61,88	461,83
	Total	0,69	3,46	6,07	4,68	34,18	108,53	154,21	553,15
2008	Male	0,58	5,02	10,60	7,92	41,80	174,17	254,31	664,75
	Female	0,58	2,41	2,13	2,02	27,98	47,01	62,18	474,08
	Total	0,58	3,73	6,37	4,92	35,01	111,46	158,21	567,76
2009	Male	0,64	5,04	10,31	7,97	41,84	173,14	259,33	671,15
	Female	0,64	1,66	2,24	1,92	27,76	47,71	65,82	483,82

it continues

Table 3. Crude mortality rates, overall and from intentionally self-inflicted injuries*, per 100,000, by sex and selected age groups – Brazil, 1996-2015

Year	Age group / Sex	Mortality from self-inflicted injuries				Overall mortality			
		10 a 14	15 a 19	20 a 29	Total ^(a)	10 a 14	15 a 19	20 a 29	Total ^(b)
2010	Total	0,64	3,37	6,28	4,90	34,92	111,33	162,65	575,83
	Male	0,62	5,08	10,56	7,90	40,03	174,66	265,34	695,21
	Female	0,56	2,02	2,35	2,13	26,38	47,44	65,19	500,40
2011	Total	0,59	3,56	6,43	4,95	33,32	111,52	164,77	595,80
	Male	0,67	4,96	11,01	8,24	39,14	180,40	258,27	706,50
	Female	0,54	2,35	2,46	2,13	24,56	48,93	64,20	513,79
2012	Total	0,61	3,66	6,71	5,12	31,97	115,16	160,76	608,16
	Male	0,87	5,48	10,55	8,49	40,40	196,43	262,58	706,10
	Female	0,47	2,31	2,21	2,28	24,73	48,62	61,83	515,12
2013	Total	0,67	3,91	6,36	5,32	32,70	123,07	161,72	608,64
	Male	0,80	2,78	11,28	8,36	38,93	198,81	255,43	691,25
	Female	0,58	1,05	2,41	2,19	24,07	49,01	61,34	514,47
2014	Total	0,69	1,92	6,83	5,24	31,64	125,09	159,14	601,82
	Male	0,92	2,77	11,16	8,41	38,58	208,86	263,16	692,82
	Female	0,74	1,12	2,37	2,18	23,64	46,56	61,75	518,83
2015	Total	0,83	1,95	6,75	5,25	31,26	129,02	163,25	604,77
	Male	0,87	3,00	10,82	8,70	35,35	200,69	255,82	702,41
	Female	0,66	1,21	2,42	2,32	22,31	45,98	59,99	535,66
	Total	0,77	2,11	6,61	5,47	28,96	124,60	158,70	618,00

Observation: Coefficient of correlation between ^(a) and ^(b) = 0.9763

* ICD10 Major Group: X60-X84

Sources: MS/SVS/CGIAE – Sistema de Informações sobre Mortalidade – SIM; IBGE (population counts and estimates); MS/SVS/CGIAE and Ripsa (population estimates)

Note: Excluding frequencies with sex unknown

sustained, structural vulnerability that the timid policies available on the issue of suicide are hardly likely to address. As the data reflect factors such as labour market relations and patterns of urbanisation, they should be the object of advanced studies and more robust public policies. Even the increase in total suicide mortality rates among women in the period (from 1.77 in 1996 to 2.32 in 2015) should be viewed with concern, among other things because it displays the same sustained pattern as for the 20 to 29 year age group.

Data for distribution of suicide by colour should be analysed on the premise (which is sustained in the specialised literature) that, in Brazil, black and *pardo* individuals return worse indicators of income and schooling. In keeping with the international pattern revealed since Durkheim's original study, mortality by suicide is greater among higher-income and -school-

ing groups, which are represented indirectly by white skin colour. These data, however, should be explored in greater depth on the basis of more detailed correlations to contemplate not only greater specification of the premises adopted, but the high proportion of the "Others" variable. The data available for 2015 show rates of 6.04 among whites, 4.89 among *pardos* and 3.13 among blacks.

More detailed data, with mortality rates by colour and age were organised for 2010, although the "Unknown" field produces distortions that undermine the precision of the analysis.

The pattern for 2015 is shown in Table 4, with more detailed distribution by age group and colour. Overall rates were 5.32 for white skin colour, followed by 4.29 for *pardos*, 3.54 for blacks and 1.78 for yellow skin colour. These results persist, by and large, for the 20-29 and 30-39 year age

Table 4. Crude mortality rate from self-inflicted injuries, by age group and skin colour, Brazil, 2010.

Age group	White	Black	Yellow	Pardo	Indigenous	Unknown	Total
0 to 4 years	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 to 9 years	0.02	0.00	0.00	0.01	0.00	414.94	0.02
10 to 14 years	0.33	0.61	1.24	0.63	11.60	937.50	0.59
15 to 19 years	3.04	2.53	1.13	3.57	33.94	9,345.79	3.56
20 to 29 years	6.16	5.52	1.24	6.20	20.94	4,586.37	6.43
30 to 39 years	6.59	4.77	2.99	6.50	17.23	6,494.33	6.74
40 to 49 years	7.90	4.59	1.14	6.83	5.22	9,469.70	7.41
50 to 59 years	8.21	3.41	1.98	4.75	1.85	12,984.05	6.73
60 to 69 years	7.47	2.76	2.63	4.91	2.77	13,145.54	6.33
70 to 79 years	8.84	3.74	5.34	6.45	0.00	21,014.49	7.92
Total	5.32	3.54	1.78	4.29	11.37	6,552.66	4.95

Sources: MS/SVS/CGIAE - Sistema de Informação sobre Mortalidade (SIM); IBGE, Censo Demográfico, 2010.

groups, although the differences between whites and *pardos* are smaller.

One important point to be considered in this table is the high rate of mortality from intentionally self-inflicted injuries among the indigenous population (11.37 per 100,000). The four brackets covering ages from 20 to 39 years reveal very high figures and a very particular phenomenon affecting Brazil's indigenous populations. There is an abundant literature on the indigenous condition in Brazil and on the suicide issue itself.

Although not directly the purpose of this article, it is important to draw attention to studies such as Grubits et al.²⁷, of the Guarani/Kaiowá group in Mato Grosso do Sul State, where 410 suicides were reported between 2000 and 2008, of which 65.0% involved 15 to 29 year olds. The study offers an important discussion of the causes and social dimensions of this phenomenon, including compulsory confinements, over-population, belief systems and imposition of cultural values, with case-by-case analysis.

The data and analyses presented here are intended to yield input to government policy decision-making on the growing vulnerability to suicide among adolescents and youth. In addition, the sociological debate over social causes in the process of health and disease has proven to be substantive and is producing more and more new elements for analysis, as in the case of the development of diverse forms of social protection network.

Final remarks

Taking an essay approach structured on the basis of the specialised literature, this article analysed the main Brazilian studies on the subject and the updating of historical series on suicide among youth and adolescents in Brazil, in order to offer thinking where international compared data help to delineate local characteristics and trends in a health problem of major magnitude. It is common for the specialised literature and the studies considered here to recognise that higher suicide rates are found among older people. This, however, has been accompanied over the years by substantial increases in suicides and suicidal ideas among youth and adolescent populations.

This fact, observed in Brazil from data collected in local administrative data bases and from analysis of longitudinal and population-bases studies, should inform policy action directed to child, youth and adolescent health.

In these populations, groups that are vulnerable for reasons of gender or are victims of violence should be regarded as a priority policy focus for public protection and social solidarity.

More than a hundred years after Durkheim's classic study, the relations between social causes and biological causes are increasingly evident. One finding regarding possible differences in approaches to the issue of suicide in the health field is that publications in leading European and North American journals highlight issues associated with

protective social networks and analytical categories such as social capital and social integration or social cohesion networks. In the Brazilian literature, meanwhile, although these issues are addressed, there is a strong concern with something dear to the formation of public health in Brazil: the influence of social determination or social cause in the process of health and disease. These concerns correlate as regards the functions of the modern State in strengthening community capacity for political action and intervention through policies to

alter structural factors in the production of diseases and of inequalities in falling ill.

Contractualist thinking, which vies with positivist thinking in political philosophy, after their idyllic coexistence in the early nineteenth century, may experience a re-encounter as a result of major advances in the neurosciences and political sociology and their intersections. The issue of suicide among young people is a re-emerging theme and this article attempts essentially to point the way forward for future studies.

Collaborations

JM Ribeiro and MR Moreira participated equally in all stages of preparation of the article.

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